

CHASE

ARCHITECTURAL

BRONZE

EXTRUDED

SHAPES



A. I. A. FILE NO. Q-1.1

15-A-1

A. I. A. FILE NO. Q-1.1

ACKNOWLEDGMENTS—for more than ten months Chase has been collecting photographs and drawings that would be helpful in explaining the varied uses of extruded shapes. In this work we are deeply indebted to many architects, specification writers, draftsmen and bronze manufacturers whose suggestions, information and help were freely given to us. With their assistance we have been able to produce a book that we believe will be of great help to every Architect in specifying Bronze and Nickel Silver in extruded forms.

CHASE EXTRUDED SHAPES

— IN —

BRONZE AND

NICKEL SILVER



CHASE BRASS & COPPER CO INCORPORATED WATERBURY CONNECTICUT
SUBSIDIARY OF THE KENNECOTT COPPER CORPORATION

USE

THIS

book when designing bronze work. It presents the information necessary for specifying Chase architectural bronze and nickel silver in extruded form.

EXAMPLES—Photographs and detail drawings have been included to show actual applications of Chase Standard Extruded Bronze Shapes to current problems of design.

ADVANTAGES—Extruded shapes have gained wide favor because they offer sharp and true profiles, lightness of weight and an economy of cost not otherwise available. Also, the variety of design possible is practically limitless.

BRONZE—Chase Architectural Bronze contains 58% Copper, 39% Zinc and 3% Lead and is probably the only copper alloy which combines all the qualities necessary to meet fabrication problems.

WHITE METAL—When a white metal effect is required, specify Chase Architectural Nickel Silver. This is available in two alloys and classified according to the Nickel content. 10% Nickel Silver contains 46% Copper, 2% Lead, 10% Nickel and 42% Zinc. 13% Nickel Silver contains 46% Copper, 2% Lead, 13% Nickel and 39% Zinc. All the shapes illustrated on the following pages may be obtained in either Architectural Bronze or Nickel Silver.



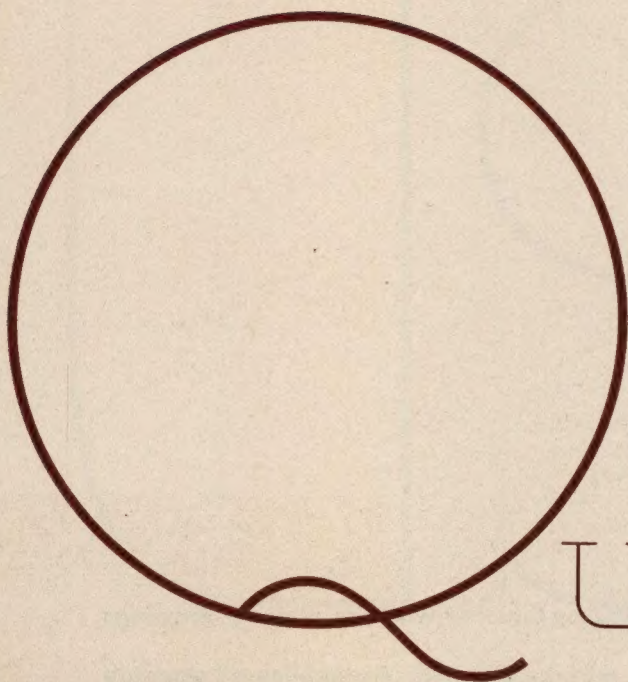
FOR THE ARCHITECT—the illustration of extruded shapes, together with the working drawings and specifications, provide tools from which designs may be detailed. Assemblies of standard extruded shapes can be made with direct tracings from the full-size sections. Though the assemblies shown are tried and in actual use we illustrate them rather as suggestions or as a point of departure for the solution of the architect's particular problem.

FOR THE ARCHITECTURAL BRONZE MANUFACTURER—tracings made from the full-size sections in this book will help in the preparation of shop drawings for presentations to the architect. Weights per lineal foot are listed under each extruded shape to simplify the preparation of estimates.

If the Architect or Bronze Manufacturer has any problems which he feels cannot be developed from the information in this book, the full facilities of the Chase Brass and Copper Co. are freely at his disposal.

INDUSTRIAL SHAPES: For use in the industrial field, extruded bronze may be obtained in many other alloys. It is used extensively for gears, valves, cams and countless other special mechanical pieces, and in this form reduces the labor cost of the finished products.

NOTE: All weights listed on the following pages are in approximate pounds per lineal foot.



QUALITIES

1

COLOR:

The natural color of Architectural Bronze is a golden bronze. On interior work this color can be preserved by a coat of clear lacquer. On exterior work it will oxidize to a dignified, rich darkened bronze that is much in demand for contemporary design. Extruded Architectural Bronze has a uniform, smooth finish that will take applied color effects such as verdigris, antique bronze and statuary bronze.

2

EASILY WORKED:

Architectural Bronze seems to be the only copper alloy having adequate high strength and hardness and which can be easily cut and machined. This combination of essential properties makes it possible to produce straight and true extruded shapes with sharply defined lines and arrises. All mouldings will match perfectly when mitering one or more shapes. This eliminates patterns and foundry and filing operations.

3

COST:

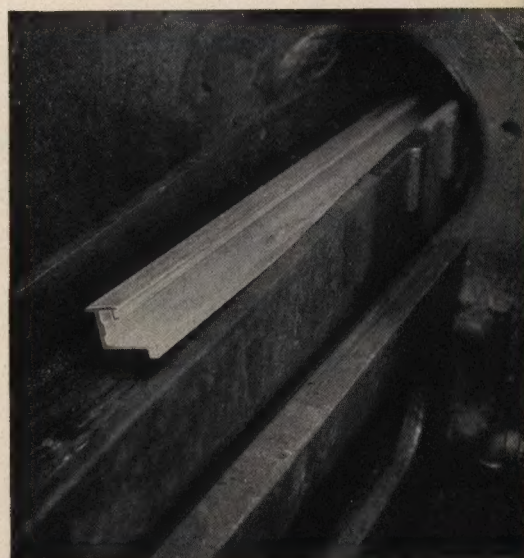
A saving is effected by using standard extruded bronze shapes in place of cast or drawn bronze. By means of the extrusion process shapes may be formed of minimum thickness which reduces the tonnage considerably and therefore the cost when a quantity of this material is being used.

P PROCESS

1. Round billets of Architectural Bronze are placed in the heating furnace and heat treated to the proper temperature for extrusion.

• **2.** The white hot billet is then conveyed to the compression chamber which has also been heated to prevent the billet from cooling.

• **3.** Architectural Bronze emerging from the steel dies in the form of a finished moulding. It is necessary to heat treat the steel dies to prevent the metal from cooling until the entire billet has been extruded.



1

2

3

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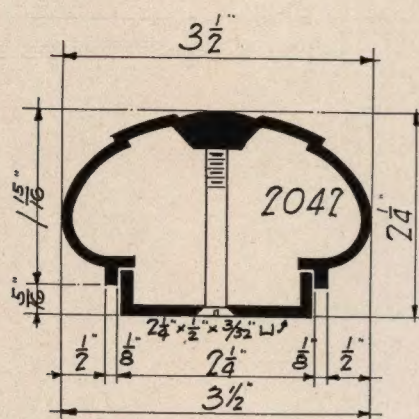
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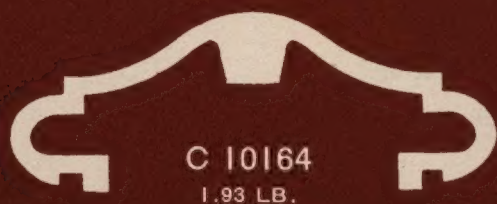
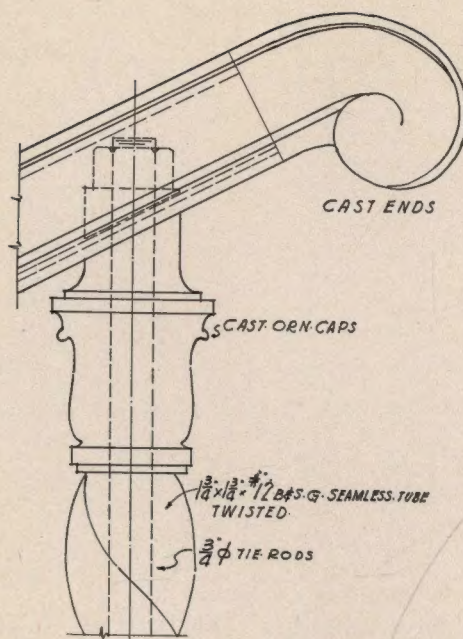
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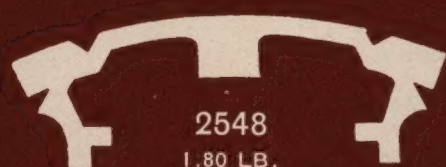


NOTE: When hand rail sections are to be bent or curved be sure to specify materials as full annealed.

Shape No. 2077 illustrated below is detailed on page 9.



C 10164
1.93 LB.



2548
1.80 LB.



2547
2.34 LB.



2077
2.93 LB.



2546
3.42 LB.



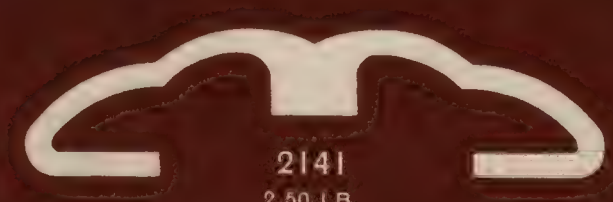
This photograph shows the hand rail on an entrance stairway. This rail illustrates the use of Chase Standard Shape No. 2042 shown below. The detail drawing is on page 1.



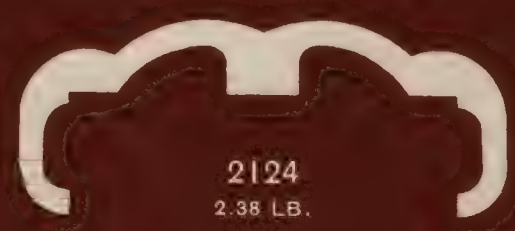
2042
4.00 LB.



940
3.56 LB.



2141
2.50 LB.



2124
2.38 LB.

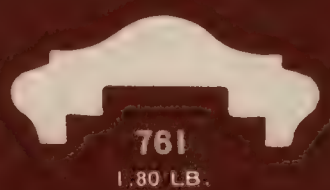


This is a view of an ornamental stair rail. The rail is a combination of wrought iron and extruded bronze. The bronze hand rail is Chase Standard Shape No. 253 illustrated on page 4.





This office building railing is a combination of wrought iron and extruded bronze. The hand rail is a Chase Standard Shape No. 163.



761
1.80 LB.



253
3.50 LB.



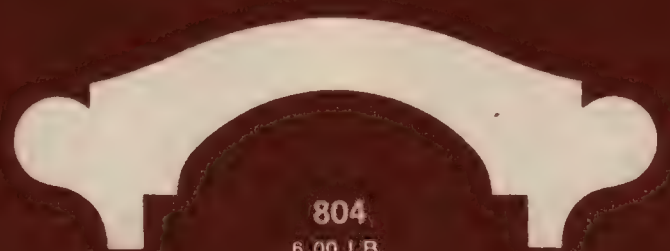
530
2.20 LB.



849
4.90 LB.



163
4.40 LB.



804
6.00 LB.



This grille is constructed of cast and extruded bronze. The main dividing bars of the grille are Chase Standard Shape No. 2221. Chase Standard Shape No. 2222 was used for the frame. This frame is illustrated on page 38. Chase Standard Shape No. 2080 was used for the baluster in railing illustrated on page 10.



2223
3.10 LB.



2221
5.48 LB.



2166
2.31 LB.



2167
3.75 LB.



2128
5.50 LB.



2126
2.56 LB.



2127
2.00 LB.



2080
1.93 LB.



183
.90 LB.



249
.54 LB.



785
.94 LB.



These spindles have been twisted from Chase Standard Shapes illustrated on these pages. In ordering shapes which are to be twisted be sure to specify "full annealed" which means that material will be furnished soft temper.



230

4.61 LB.



161

1.34 LB.



2554

2.94 LB.



362

.95 LB.



208

4.78 LB.



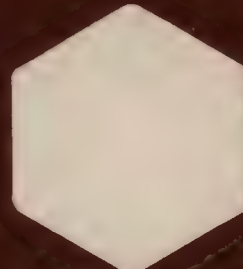
2555

1.82 LB.



202

5.50 LB.



227

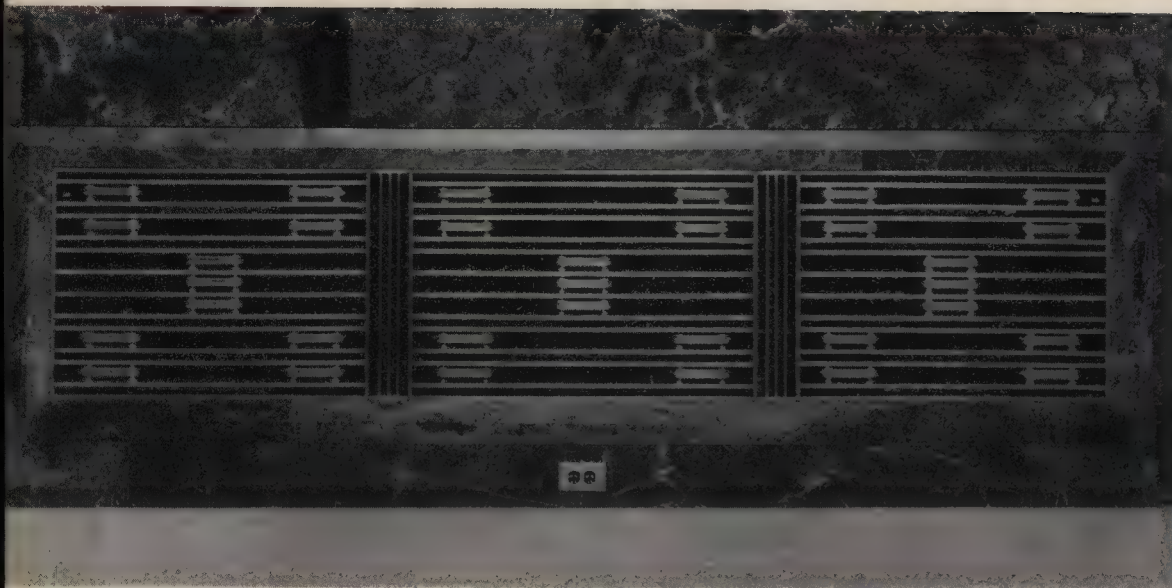
4.97 LB.



45

1.63 LB.

7 SPINDLES AND GRILLE BARS

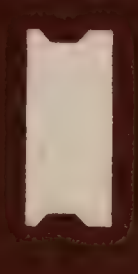


This grille is constructed of plain flat extruded bronze bars. The ornaments between the bars are cast bronze. The simplicity of this design makes it especially effective for bank or office building design.



2523

1.89 LB.



51

1.54 LB.



2549

2.16 LB.



90

1.97 LB.



2551

.84 LB.



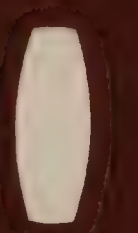
2550

1.89 LB.



17

1.47 LB.



147

1.21 LB.



77

1.06 LB.



116

.84 LB.



16

.59 LB.



201

1.35 LB.



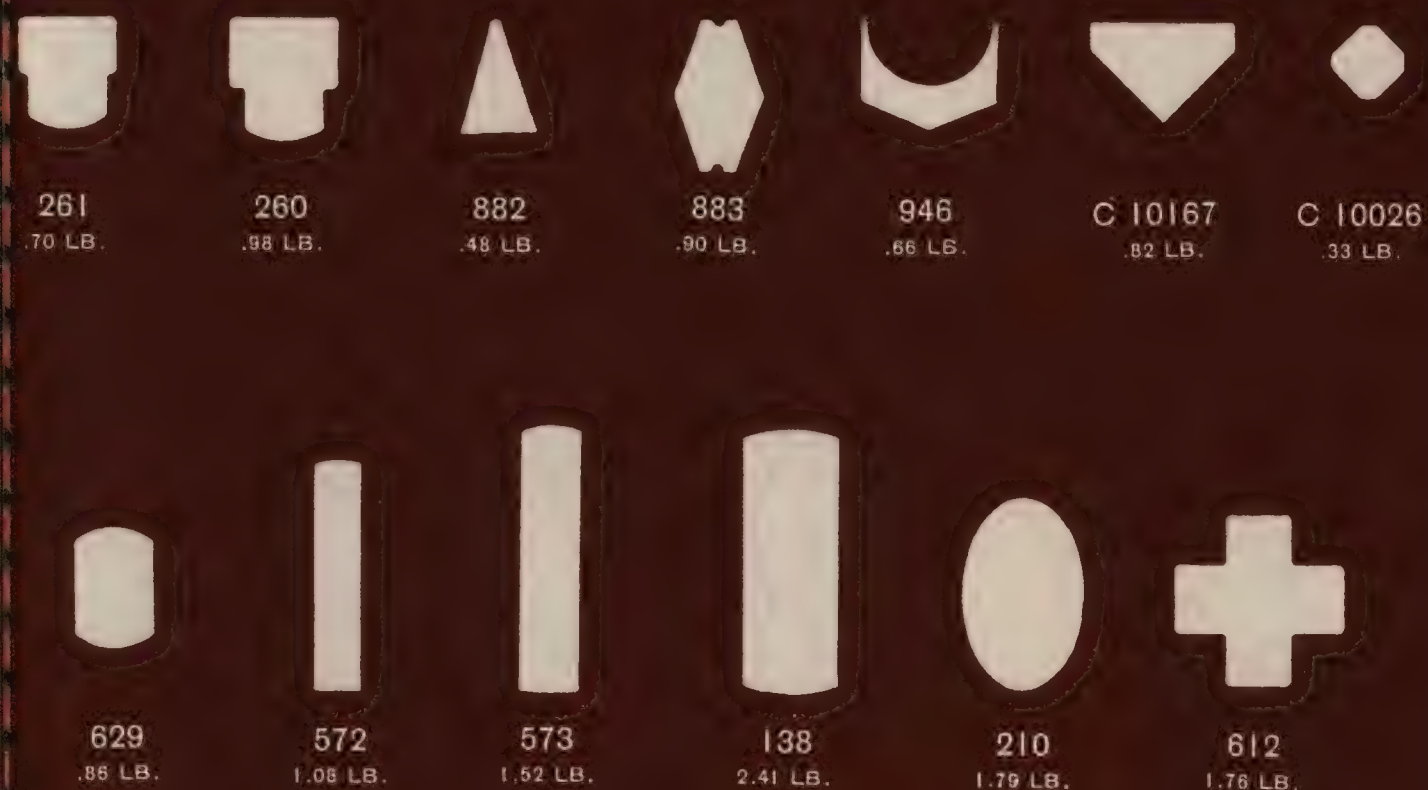
8

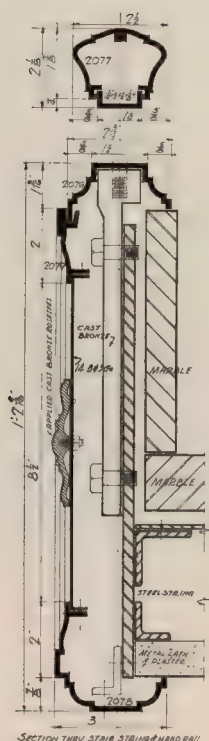
1.86 LB.

ALL SECTIONS ARE DRAWN TO ACTUAL SIZE—ALL WEIGHTS LISTED ARE IN POUNDS PER LINEAL FOOT



This photograph illustrates one of the many bronze grilles installed in a Post Office screen. Notice the attractive effect gained by using plain twisted spindles in the wicket grille. The main division bars of the large grille are described and detailed on pages 47 and 48.





LEFT

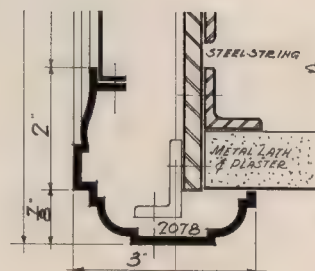
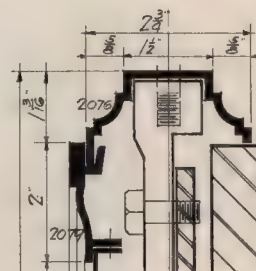
Section through Stair String and Hand Rail. The twisted spindles shown in the stair illustrated on page 10 were cast from plaster models. The plain ones as well as the other sections illustrated are Chase Standard Extruded Bronze Shapes.

For hand rail shape 2077 see page 1.

For baluster shape 2080 see page 5.

RIGHT

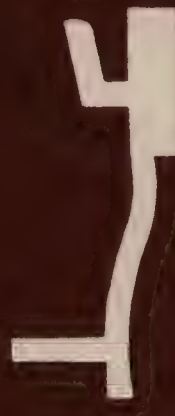
An enlarged section of top of face string showing application of standard shapes No. 2076 and 2079,—also an enlarged section of bottom of face string and soffit moulding showing application of standard shape No. 2078.



C 10320
4.82 LB.



2516
1.56 LB.

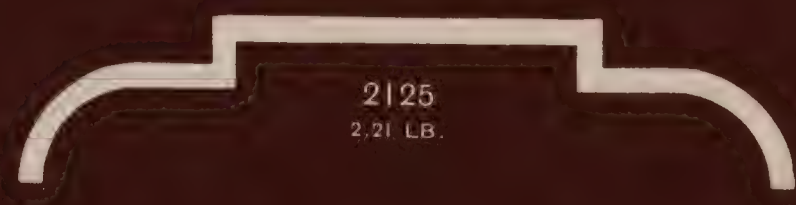


2079
1.75 LB.



This office stair railing is a combination of cast and extruded bronze. The cast bronze brackets fastened to the steel string were used as studs to which the railing spindles were fastened. Every fourth spindle was fastened to one of these brackets making a direct and rigid connection to the steel string. This method assured a sturdy job and prevented the rail from swaying. The rosettes were provided with an additional dowel to prevent them from turning. This bronze face string and rail is detailed on page 9.

Shape 2516 is detailed on page 35 and illustrated on page 36.



2125
2.21 LB.

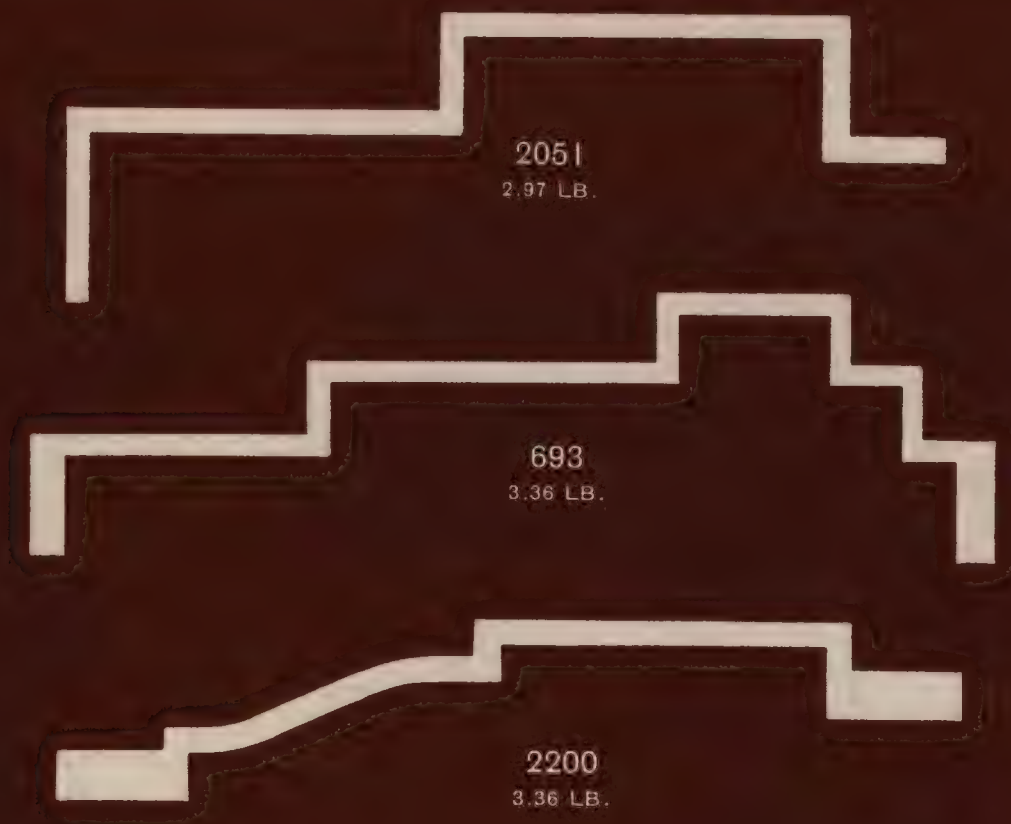
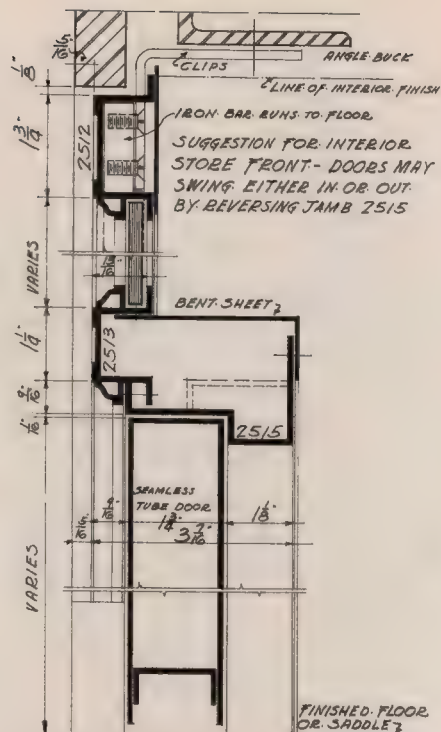
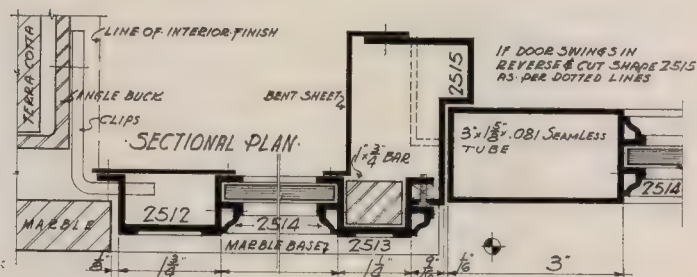


2076
2.20 LB.



2078
2.94 LB.

LOWER: The drawing below is a sectional plan through the store front. Shape 2514 is illustrated on page 31.





This interior store front is constructed of Chase Standard Extruded Bronze Shapes Nos. 2512, 2513, 2514 and 2515. The store front, door and doorway are detailed on page 11. Notice how the units were assembled quickly and economically by using standard extruded bronze shapes.



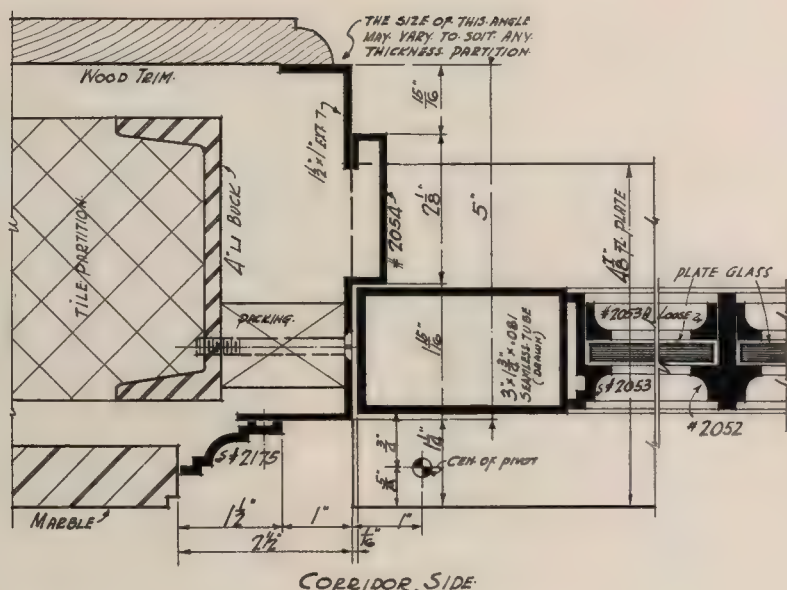
2500
2.21 LB.



2511
2.16 LB.



2515
2.02 LB.



SECTION THROUGH JAMB OF DOORWAY

Section through jamb of doorway illustrated on page 14. Chase Standard Shape No. 2054 illustrated below was used for this jamb. Other shapes used in the construction of this doorway are illustrated as follows:

2052.....	page 33
2053.....	page 29
2053-A.....	page 32
2175.....	page 19



2170
3.60 LB.



2054
3.13 LB.



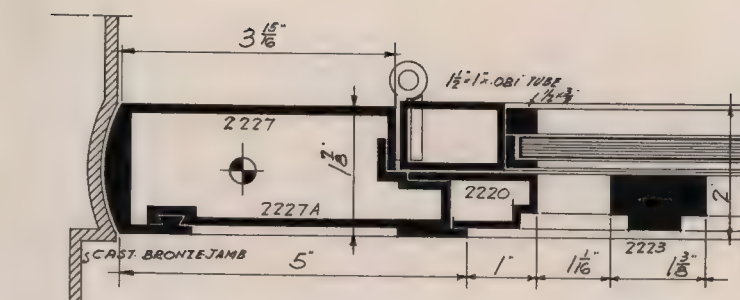
C 10178
3.17 LB.



An interior doorway on which Chase Extruded Bronze Standard Shapes were used. A detailed sectional plan of this doorway is reproduced on page 13.

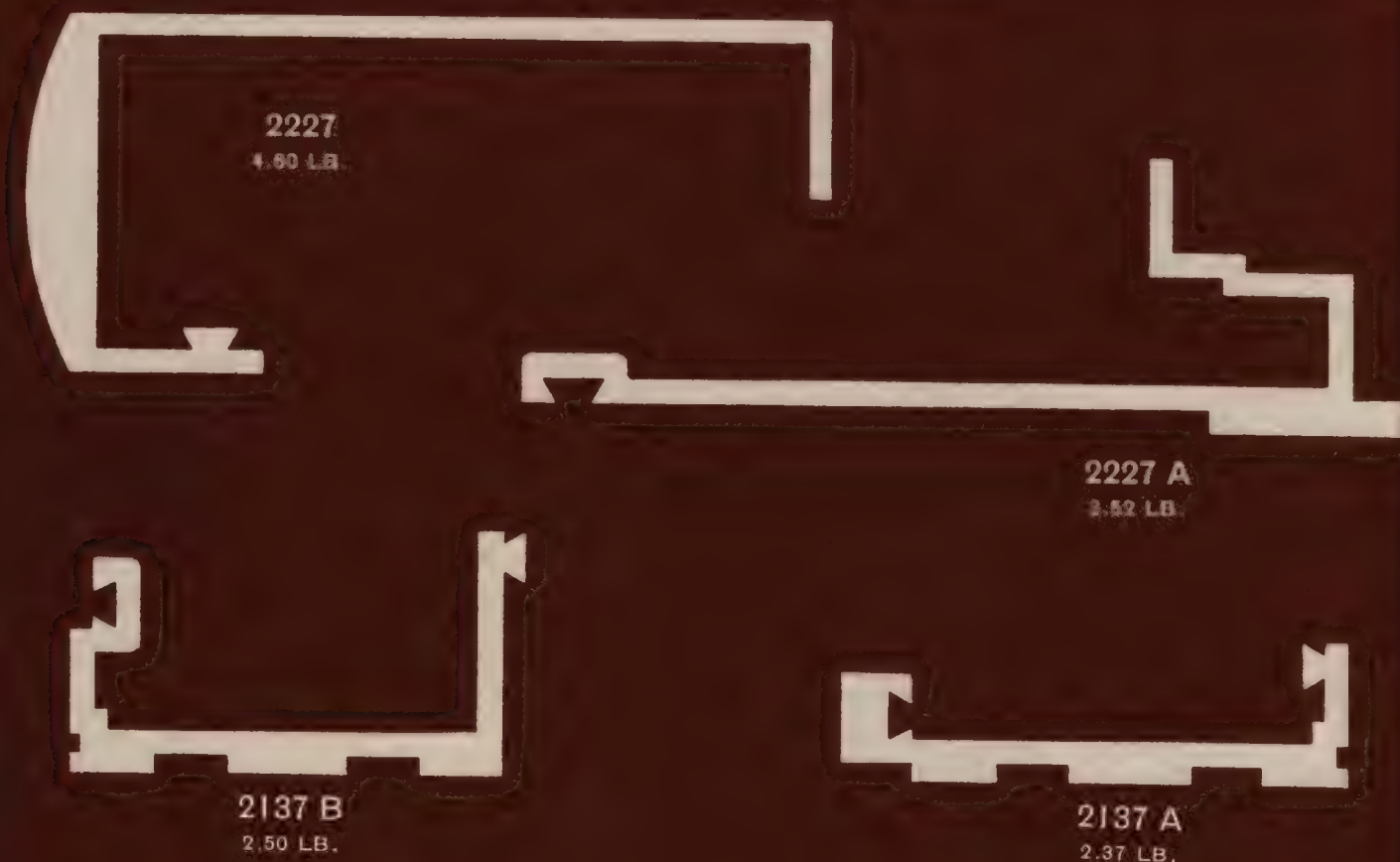
Shape 2168 is detailed on page 17.

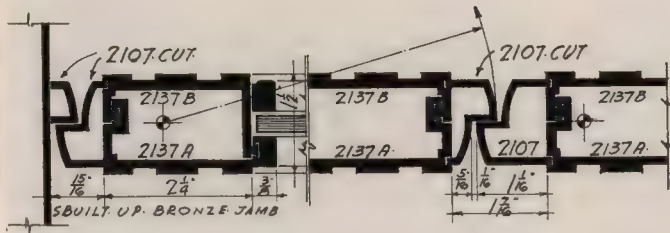




SECTION THROUGH JAMB OF DOORWAY

This smartly designed door is constructed entirely of architectural bronze. Chase standard extruded bronze shapes Nos. 2227 and 2227A were used for the door stile. Standard shapes No. 2220 on page 38 and No. 2223 on page 5 were used to construct the bronze grilles. The sectional plan illustrates how these shapes were assembled.

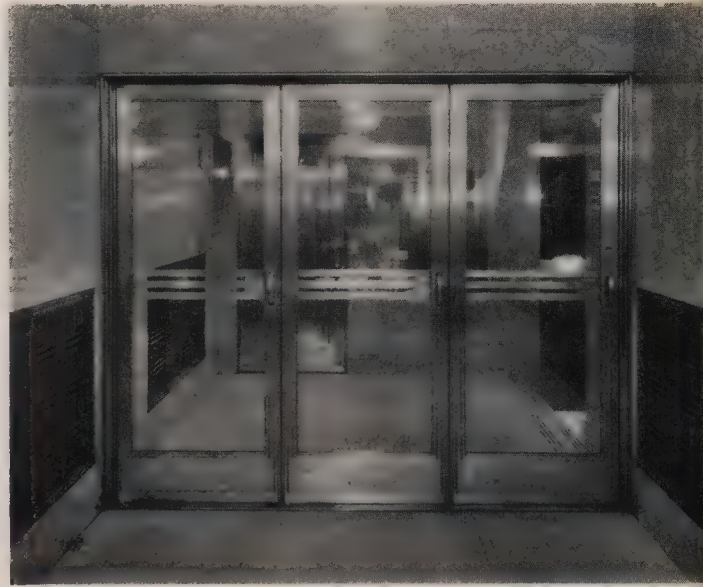




SECTIONAL PLAN THROUGH THE DOORS

The sectional plan reproduced above will show you how effectively Chase extruded bronze shapes Nos. 2137A, 2137B and 2107 were used in the construction of this triple door assembly. The jambs, transom bar, transom sash, etc., were built up from standard size bars, angles and channels.

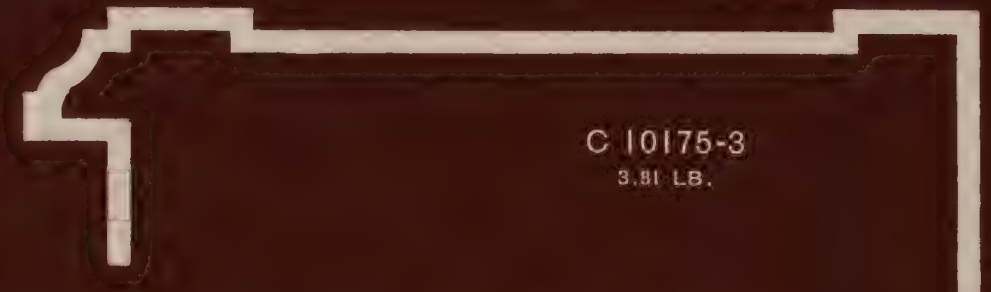
Shape C 10134 illustrated below is reversible and two pieces are used to make a complete closed unit.



C 10134
2.48 LB.



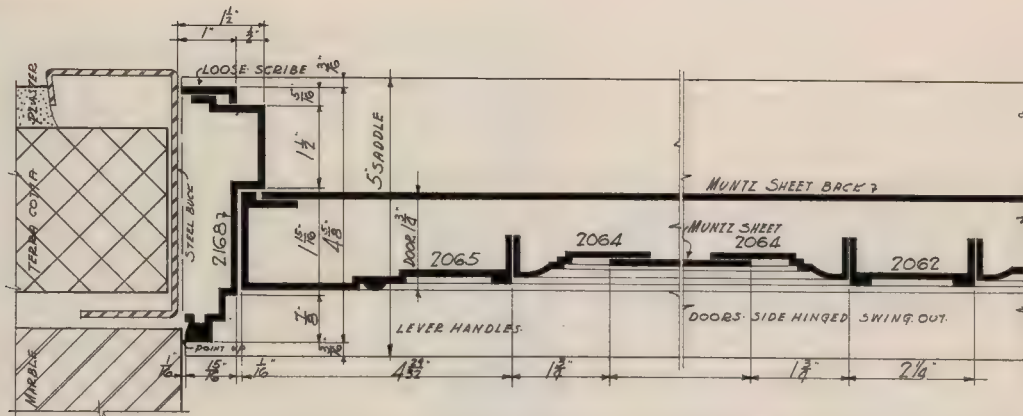
2107
1.06 LB.



C 10175-3
3.81 LB.



C 10175-2
2.23 LB.

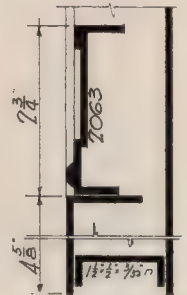


SECTIONAL PLAN THROUGH BRONZE DOOR AND JAMB

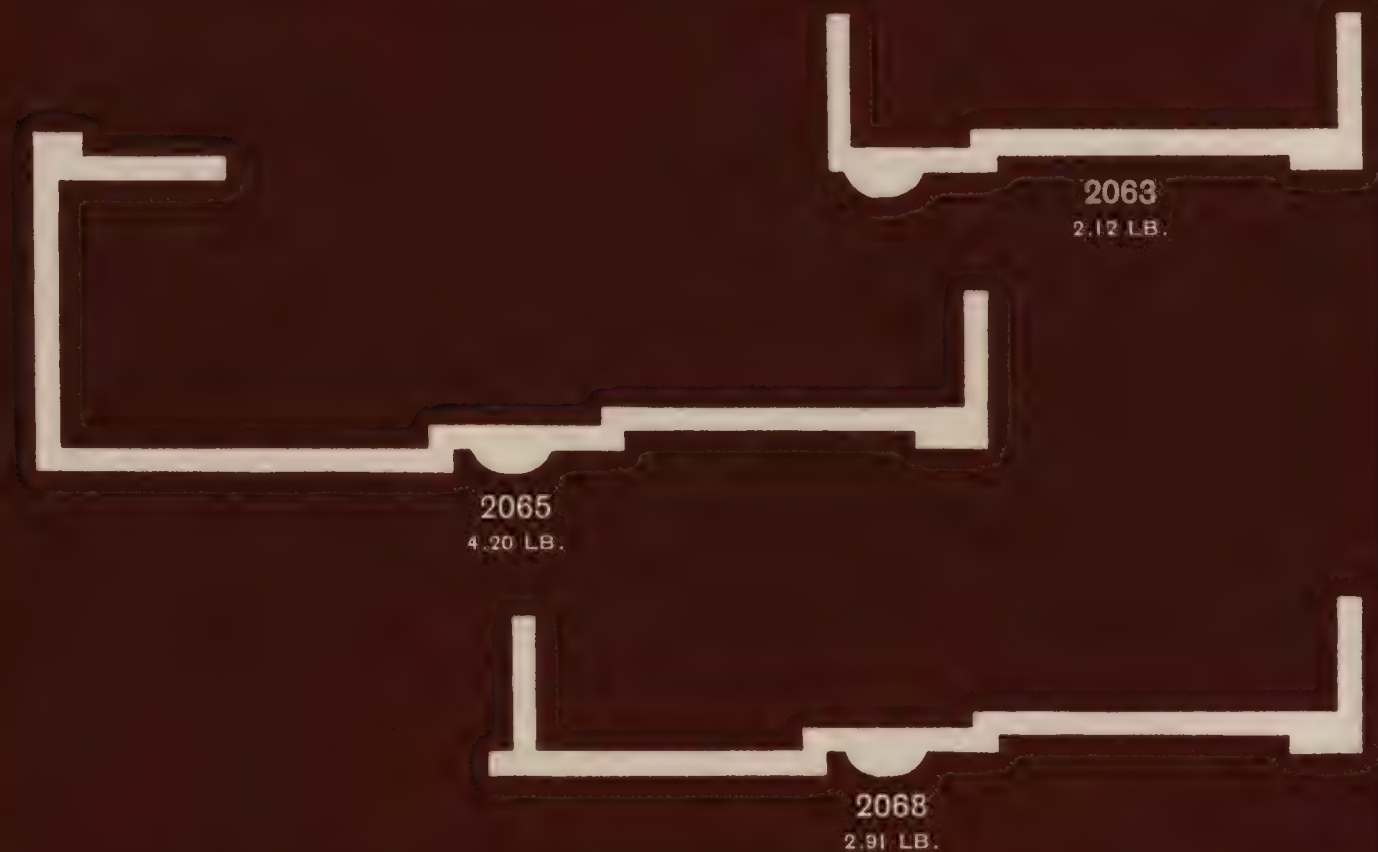
SINGLE SWING BRONZE DOOR.

This single swing bronze door is illustrated on page 18. The sectional plan shows how it was built up of Chase Standard Extruded Bronze Shapes Nos. 2062, 2063, 2064 and 2065. Shape 2062 is on page 25 and 2064 is on page 20. Standard shape No. 2168 illustrated on page 14 was used for the door jamb. The center opening elevator doors were constructed of standard shapes Nos. 2066, 2067 and 2068.

AT RIGHT. Standard shape No. 2063 was used exactly as indicated for both the single swing door and the center opening elevator doors.



SECTION THRU
BASE RAIL

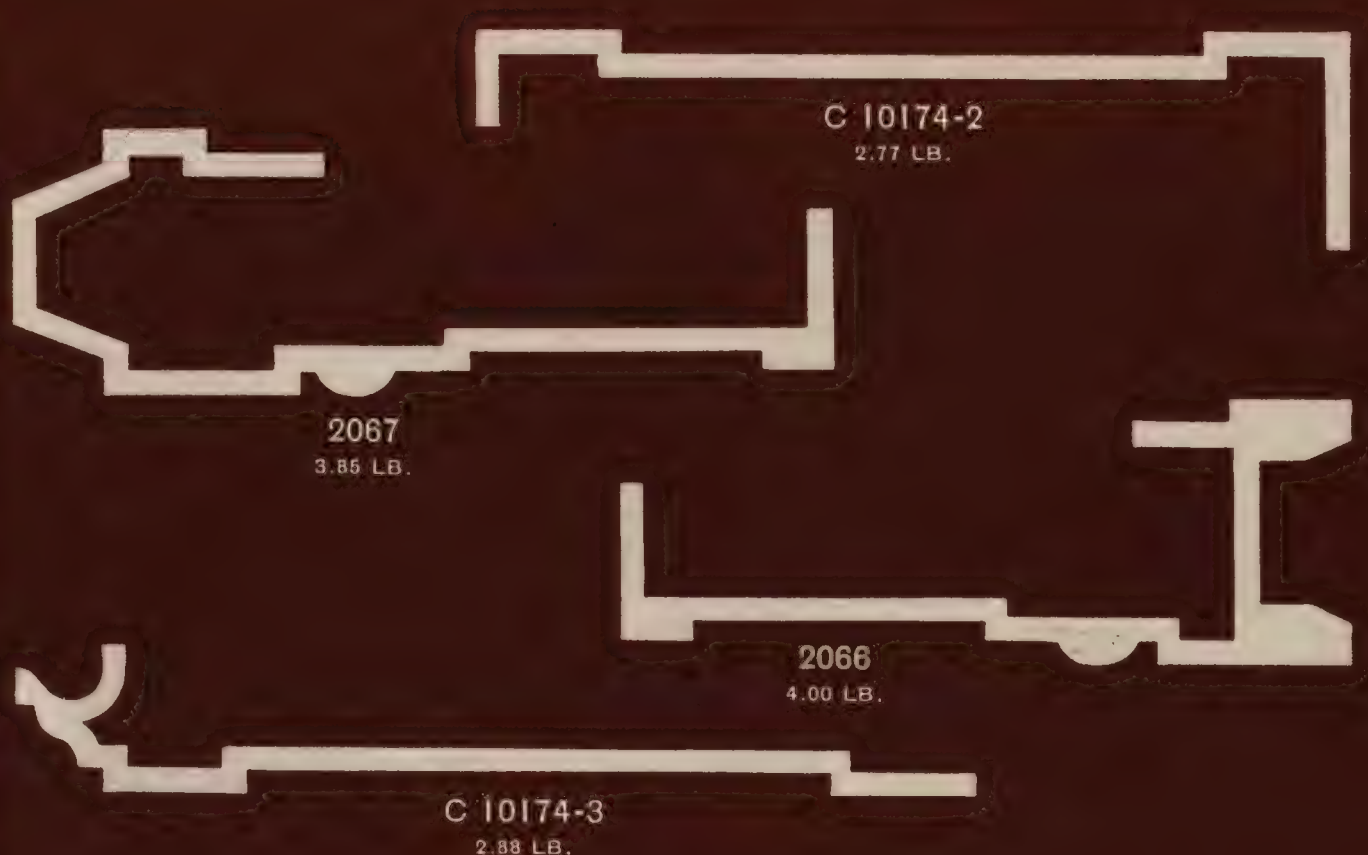
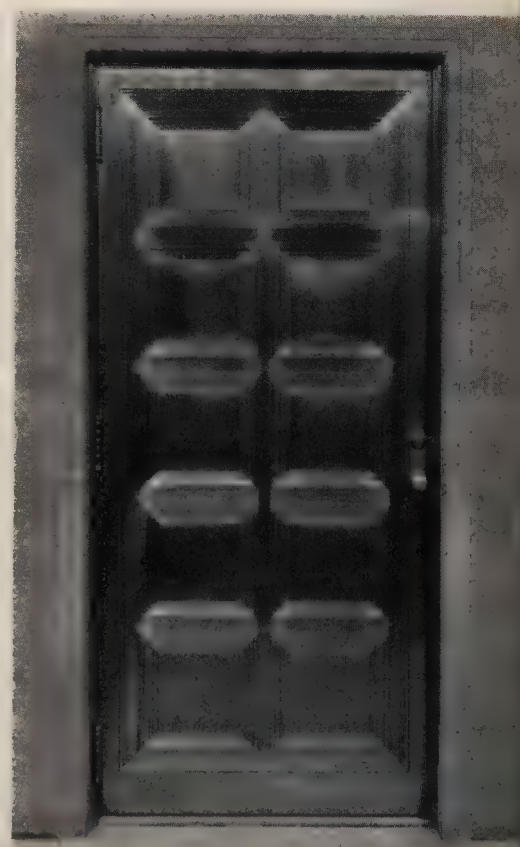


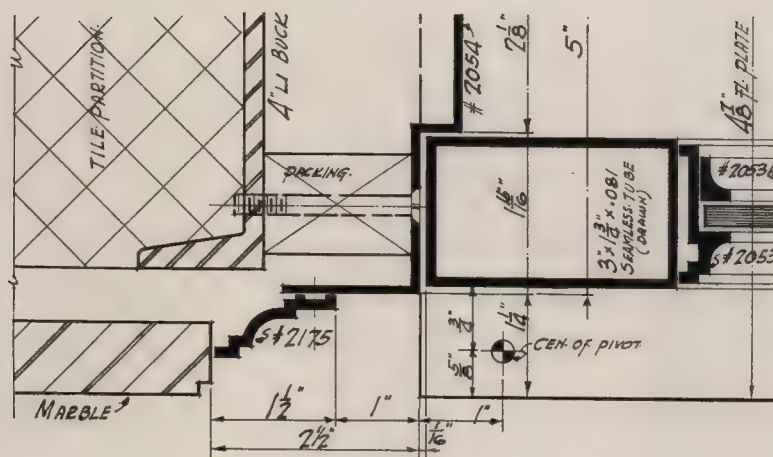


LEFT: Center opening elevator doors similar in construction to the single swing door except that cast bronze panels were used in place of plain extruded mouldings and sheet panels.

RIGHT: This single swing door a combination of extruded Bronze and Muntz metal sheet is built up of Chase Extruded Bronze Standard Shapes as described and detailed on page 17.

Shapes C 10174-2 and C 10174-3 were used in combination to form a screen door stile. Shape No. C 10174-1 illustrated on page 32 was used as a stop to hold the screen cloth.





SECTION THROUGH SIDE JAMB OF DOORWAY.

This detail drawing shows the application of standard shape No. 2175 for the scribe. The complete detail drawing for this installation is illustrated on page 13.

See page 40 for details of shape No. 2175.



2560
1.65 LB.



2175
.87 LB.



2529
2.25 LB.



2530
2.25 LB.



C 10324
.94 LB.



2562
1.44 LB.



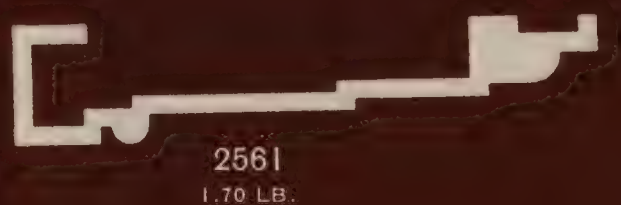
The jamb and scribe mouldings used in the fabrication of this doorway are Chase Standard Shapes Nos. 2054 illustrated on page 13 and 2175 illustrated on page 19.

The door is constructed of Chase seamless tube with extruded bronze glass frames and muntins. Shape No. 2053 was used for the glass frame and is illustrated on page 29. Shape No. 2052 used for the muntins is illustrated on page 33.

The glass stops are shape No. 2053A illustrated on page 32.

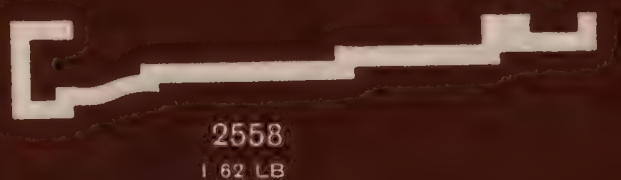
The complete detail drawing of this installation is reproduced on page 13.

Shape 2064 is detailed on page 17.



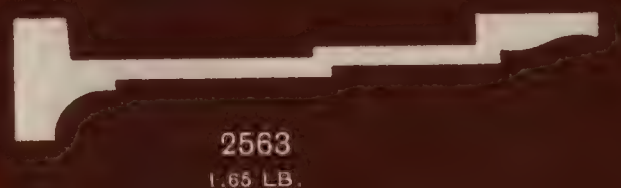
2561

1.70 LB.



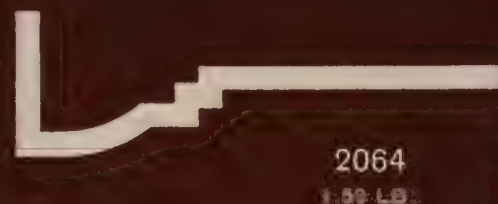
2558

1.62 LB.



2563

1.65 LB.



2064

1.59 LB.



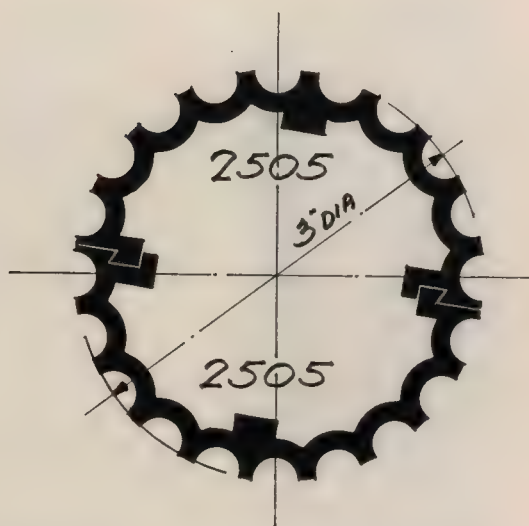
2154

2.31 LB.



2559

1.65 LB.



This detail illustrates the method used to produce full round pilasters using two sections of a reversible shape. An assembly of this kind is especially effective when the smaller sections are used to form colonnettes in conjunction with other members.



695
3.19 LB.



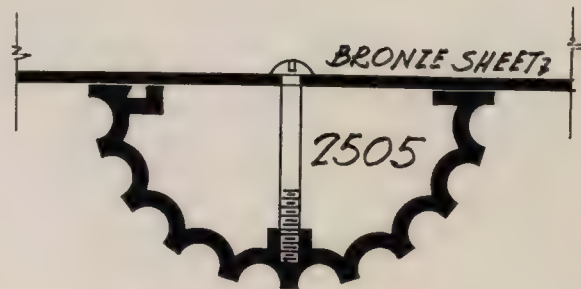
2508
1.20 LB.



2507
2.00 LB.



2505
2.52 LB.



In using the half round sections, when it is necessary to apply this to a sheet or other member, the dove tail should be cut away and the section fastened to the adjacent member using the lug in the center of the shape as illustrated here.



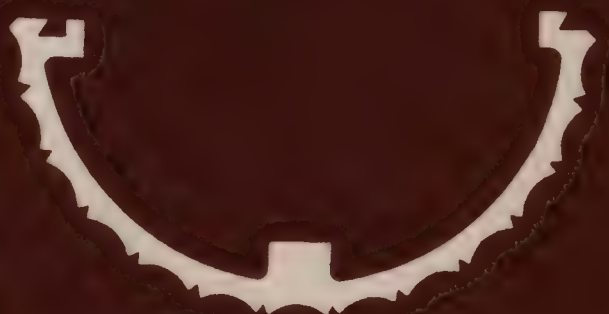
2504

1.08 LB.



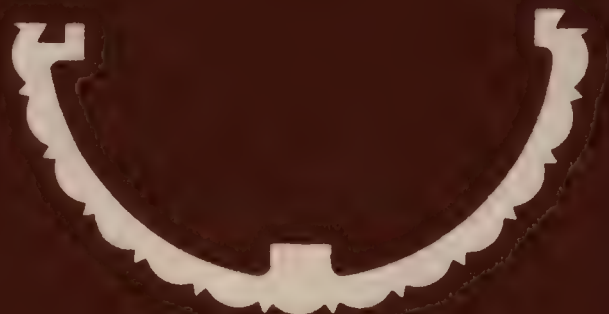
2506

1.20 LB.



2503

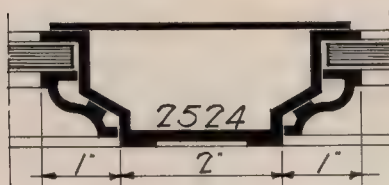
2.28 LB.



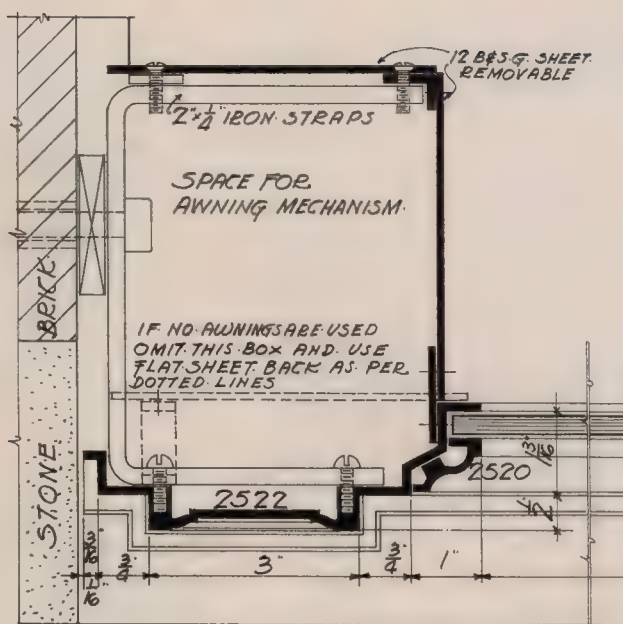
2509

2.25 LB.

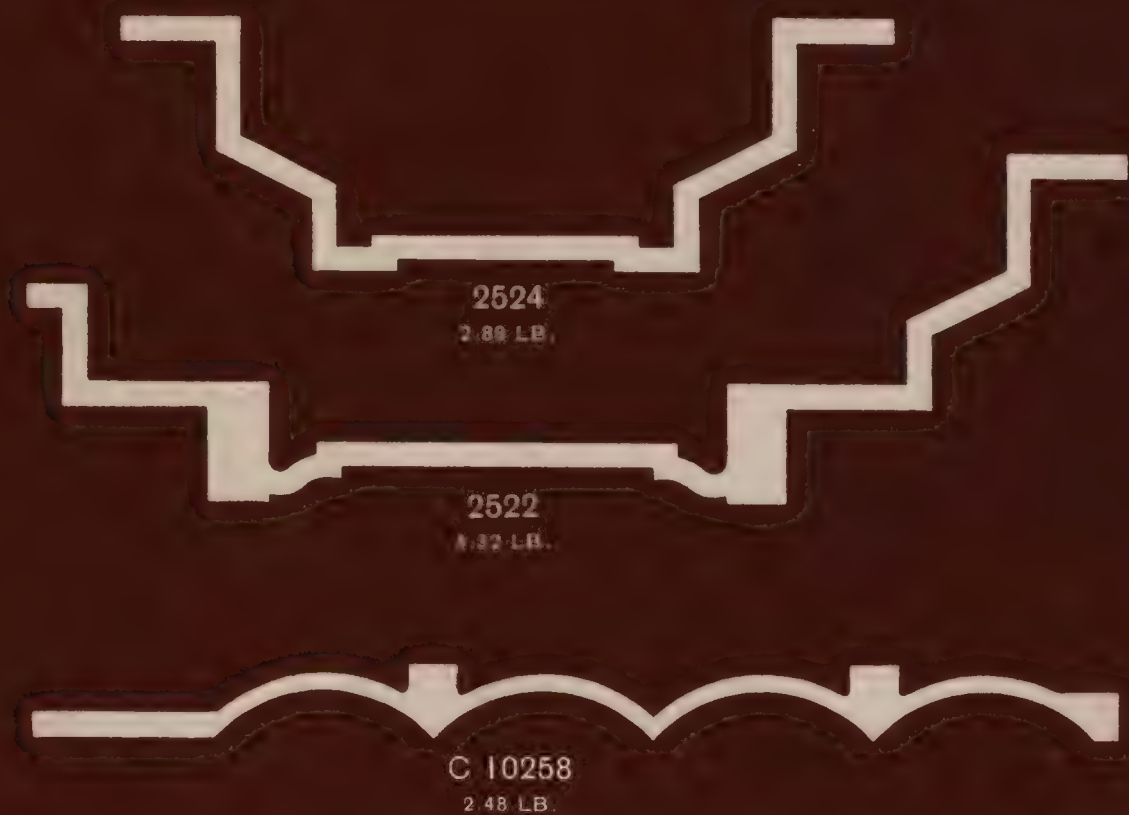
These detail drawings illustrate how Chase Standard Shapes Nos. 2520, 2522 and 2524 were assembled to construct the exterior store front illustrated on page 24. For complete details of this installation refer to pages 35 and 36.



SMALL MULLION



SECTION THROUGH JAMB





This extruded bronze exterior store front was constructed of Chase standard shapes No. 2520, 2522 and 2524. As this store front occurred on the second story it was not necessary to use the deep jamb, therefore the shallow jamb was used as indicated by dotted lines in detail drawing shown on page 23.

Shapes 2512 and 2513 are illustrated on pages 11 and 12.



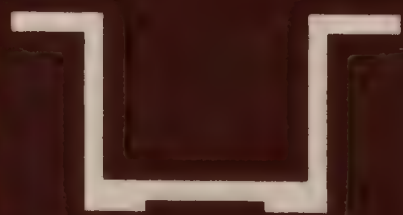
2565

1.71 LB.



2567

1.68 LB.



2513

1.44 LB.



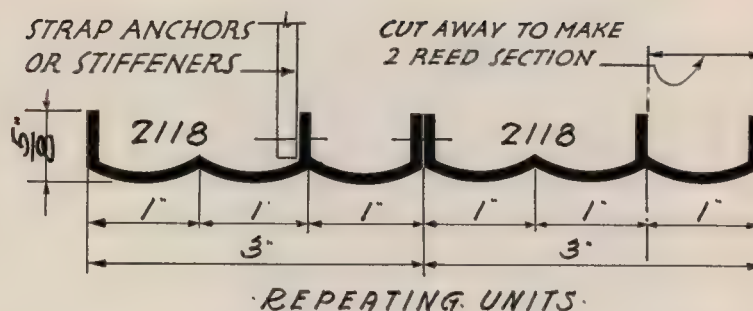
2512

2.00 LB.



2034

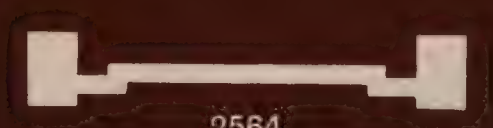
3.34 LB.



This shape suggests a method for designing extruded bronze shapes when 2 reed and 3 reed sections are required and there is not a sufficient quantity of either size to warrant making separate dies. The fabricator orders enough of the 3 reed shape to cover the total amount of material required for both conditions. He uses the 3 reed section as is, and then cuts away one reed from the balance of the material to make the 2 reed shape as illustrated.

Shape 2062 is illustrated on pages 17 and 18.

Shape 2120 is illustrated on pages 40 and 51.



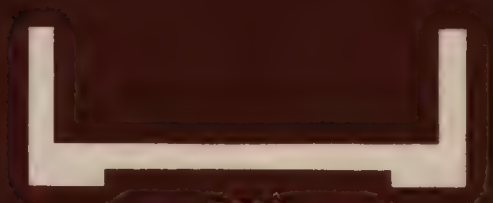
2564

1.44 LB.



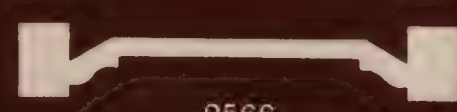
2120

1.47 LB.



2062

1.84 LB.



2566

1.50 LB.



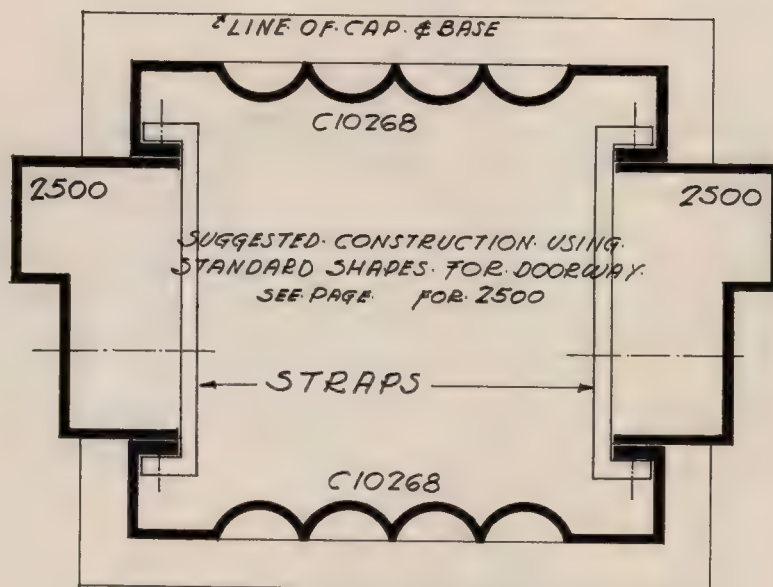
C 10170

1.95 LB.

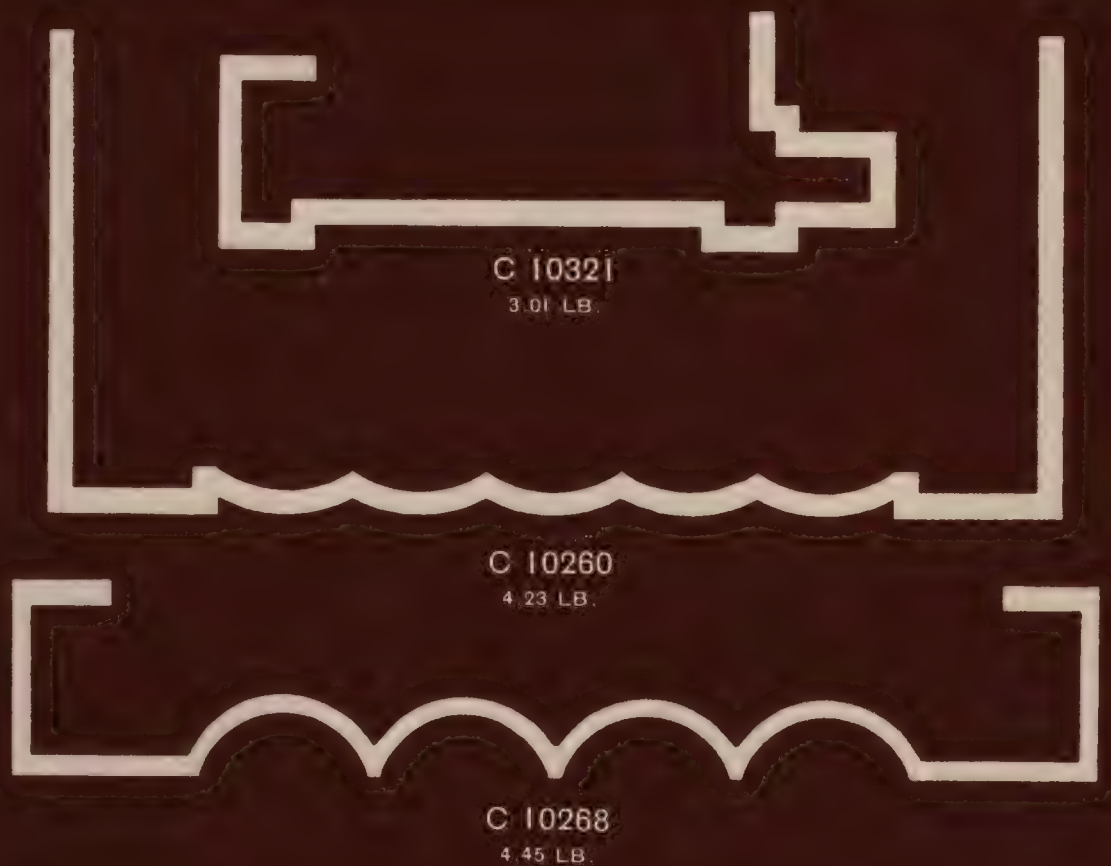


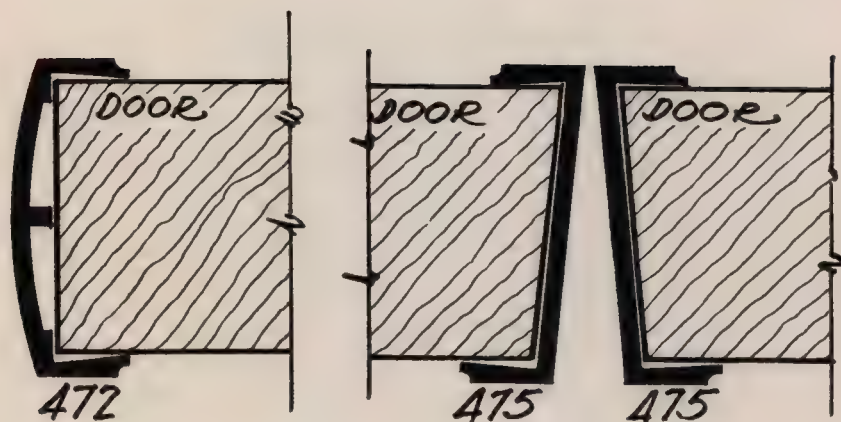
2118

1.41 LB.

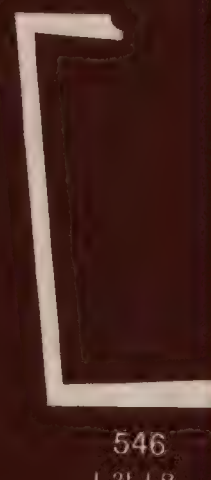
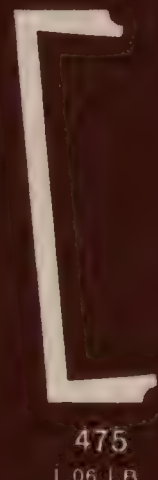
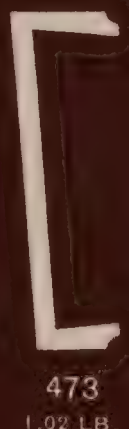
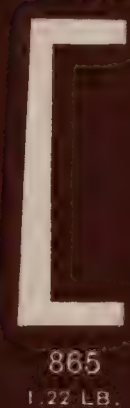
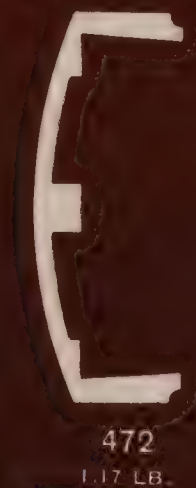


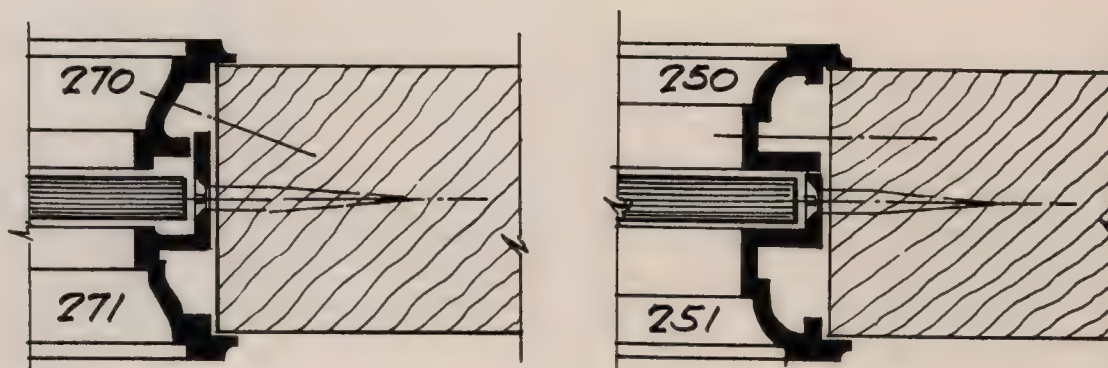
This detail suggests the use of extruded bronze standard shapes for making up door mullions or jambs. The cap and base may be either plain or ornamental cast bronze. Shape 2500 is also illustrated on page 12.



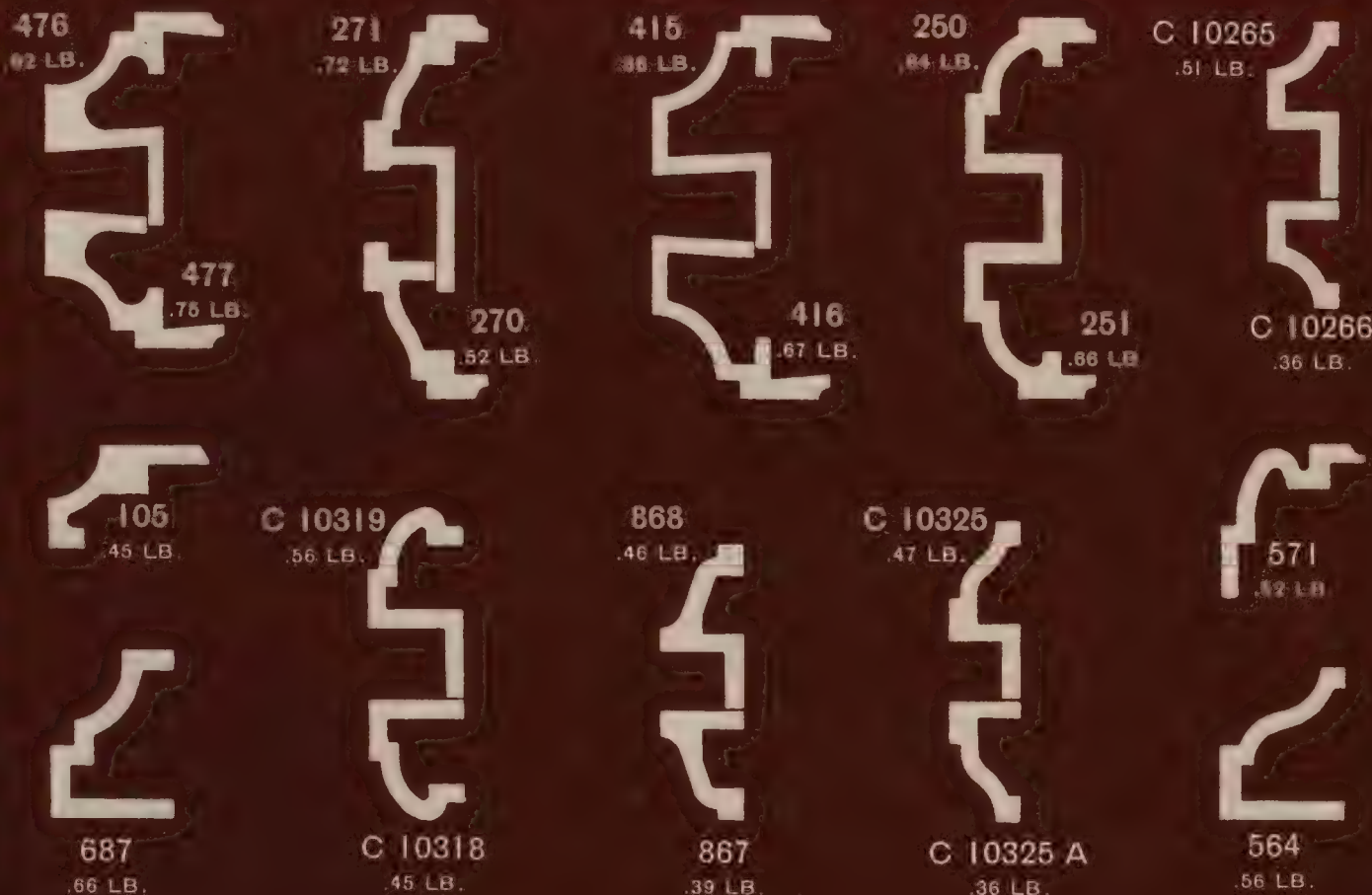


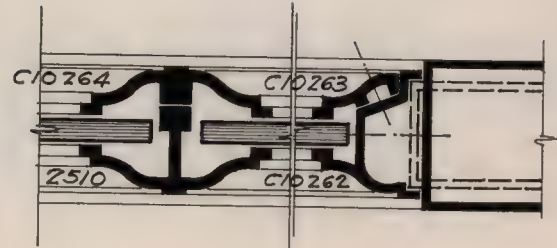
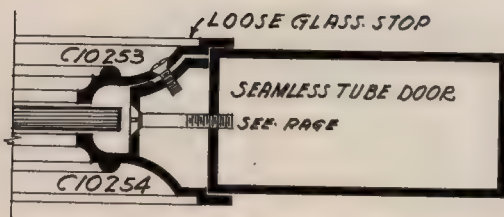
This detail indicates the application of Chase Standard Shapes 472 and 475 as Bronze edgings for doors. These edgings are strong and prevent the door material from becoming marred or dented, a condition which so often happens. These shapes are designed to match the glass frames illustrated on page 28. The solid bull nose sections are used in connection with bronze doors only.





NOTE: These detail drawings illustrate the application of Chase standard extruded bronze shapes for door construction. These shapes may be used on either wood, bronze, steel or kalamein doors. Many of these mouldings are designed to match up with door edgings illustrated on page 27. Additional glass frames are illustrated on pages 29 and 30.





Sections showing the use of extruded bronze glass frames applied to either bronze, steel, wood or kalamein doors. Muntins which match with many of these glass frames are shown on pages 33 and 34. Glass stops which match with glass frames and muntins are shown on pages 31 and 32. Shapes 2510 and C 10264 are illustrated on page 34.



2092
.84 LB.



C 10262
1.03 LB.



C 10254
1.47 LB.



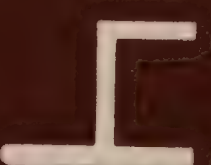
2053
1.13 LB.



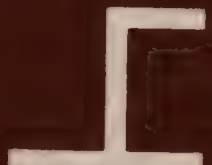
2045
1.34 LB.



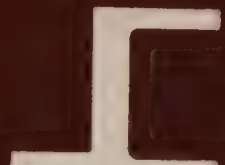
668
1.31 LB.



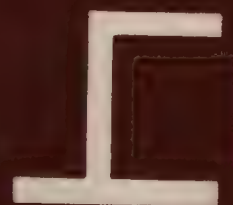
726
.66 LB.



318
.88 LB.

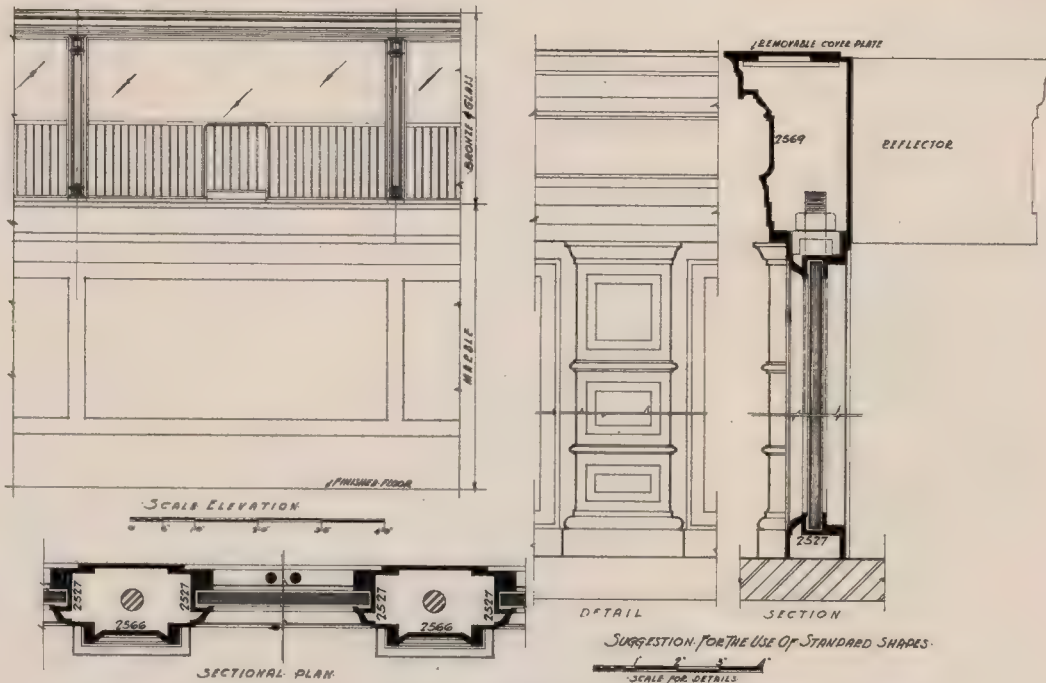


706
1.06 LB.

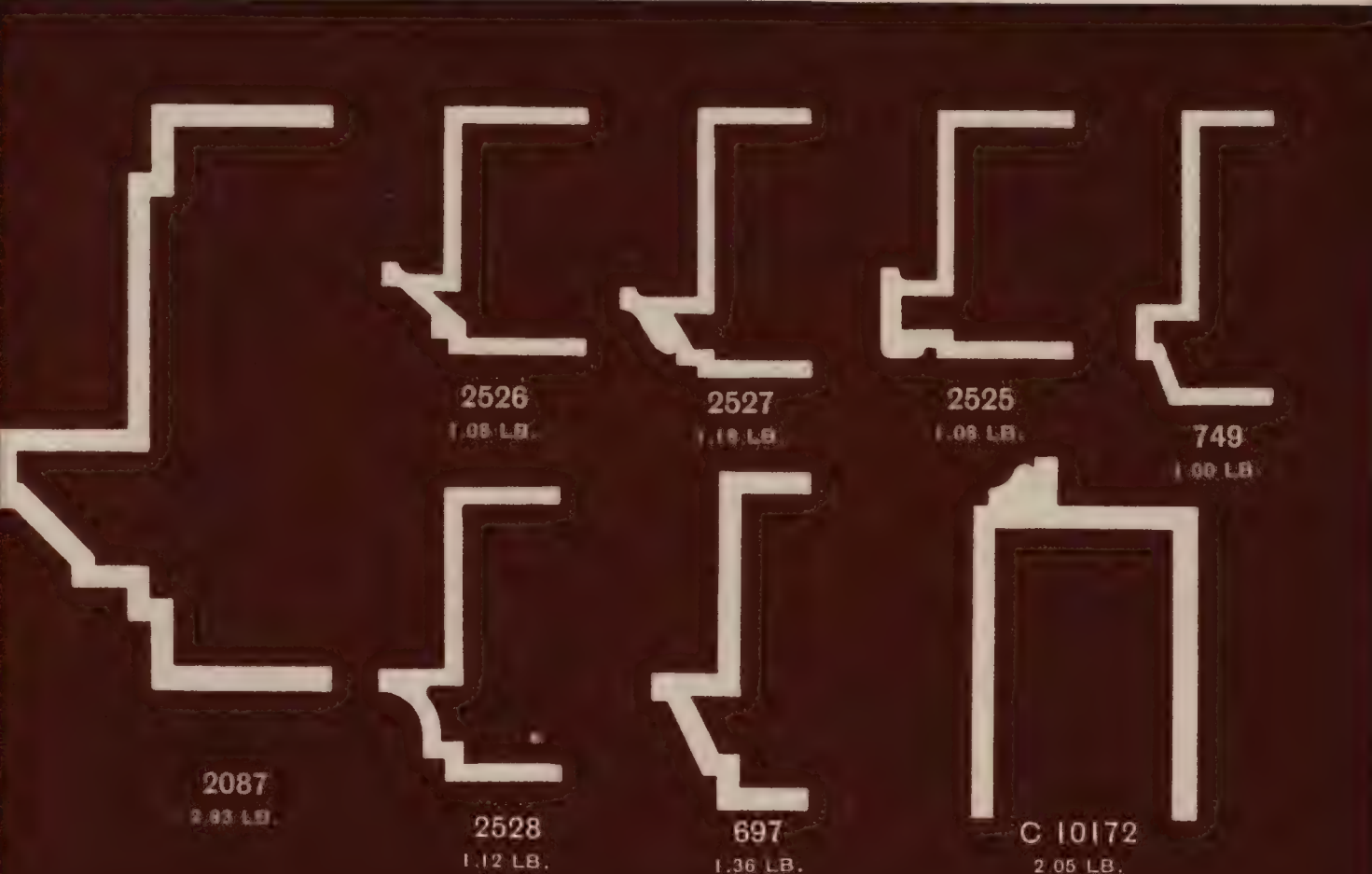


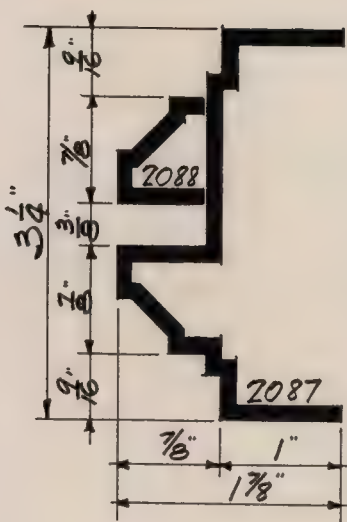
2047
1.08 LB.

ALL SECTIONS ARE DRAWN TO ACTUAL SIZE—ALL WEIGHTS LISTED ARE IN POUNDS PER LINEAL FOOT



DETAILS FOR BRONZE COUNTER SCREEN USING STANDARD SHAPES
Shape 2527—page 30. Shape 2566—page 25. Shape 2569—page 36.



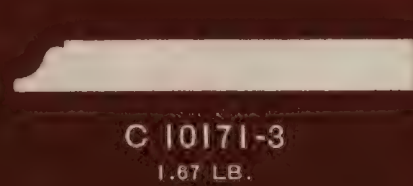
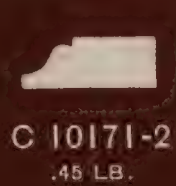
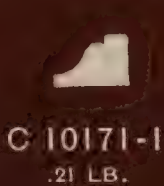


GLASS FRAME ASSEMBLY

Detail of Chase standard glass frame No. 2087 and glass stop No. 2088. The standard glass frame No. 2087 is illustrated on page 30.

Shape C 10263 is detailed on page 29.

Shape 2520 is detailed on page 35.

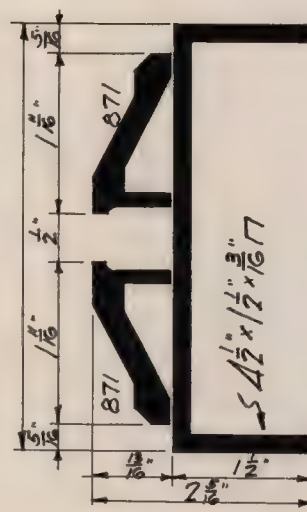


GLASS FRAME ASSEMBLY

Illustration of a glass frame to be used where exceptional weight is needed. This is constructed of standard shape No. 871 and a standard extruded bronze channel. Refer to page 73 for complete list of standard extruded channels which may be substituted for the one used in the drawing.

Shape C 10253 is detailed on page 29.

Shape C 10174-1 is a stop for a Bronze Screen Door and was used with shapes C 10174-2 and C 10174-3 illustrated on page 18.



622

18 LB.



332

63 LB.



2540

40 LB.



C 10175-1

50 LB.



2580

487 LB.



C 10174-1

68 LB.



50

1.62 LB.



2534

74 LB.



2531

1.00 LB.



2539

38 LB.



2053 A

40 LB.



2541

38 LB.



2151

69 LB.



C 10253

.80 LB.



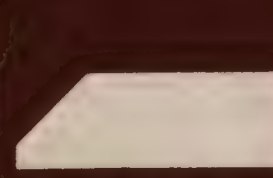
869

1.44 LB.



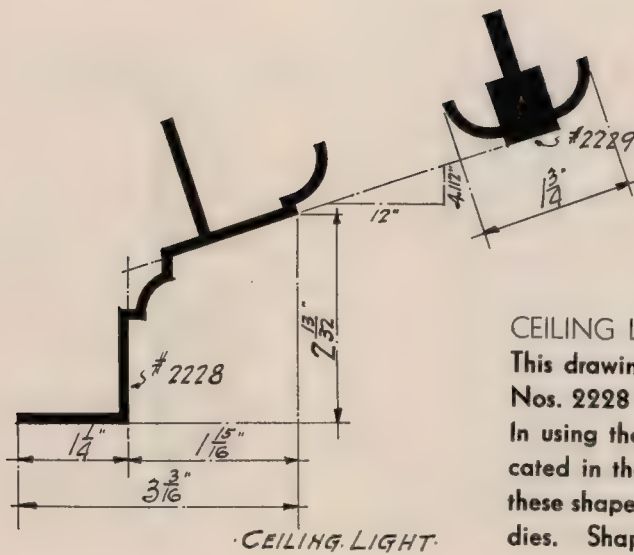
871

2.52 LB.



C 10168

2.10 LB.



CEILING LIGHT ASSEMBLY

This drawing illustrates the use of standard shapes Nos. 2228 and 2229 for an interior ceiling light. In using these shapes be sure to follow pitch indicated in the drawing, as it is impossible to furnish these shapes in any other pitch without making new dies. Shape No. 2228 is illustrated on page 35.



492

1.41 LB.



545

1.35 LB.



2048

1.18 LB.



696

1.38 LB.



2090

1.93 LB.



2544

1.62 LB.



2545

1.44 LB.



2543

1.35 LB.



2052

2.16 LB.



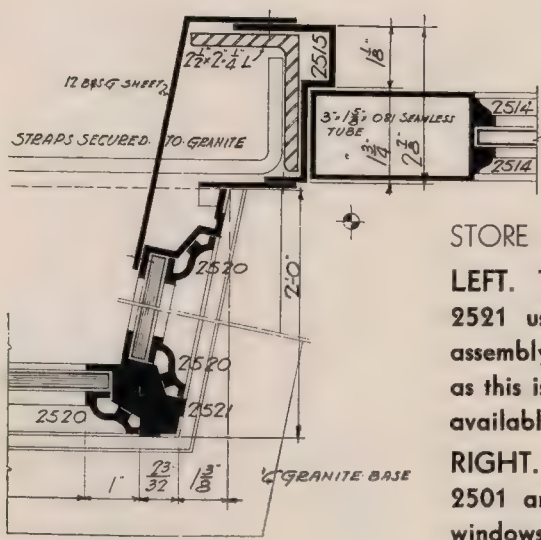
2169

2.50 LB.



2229

3.04 LB.

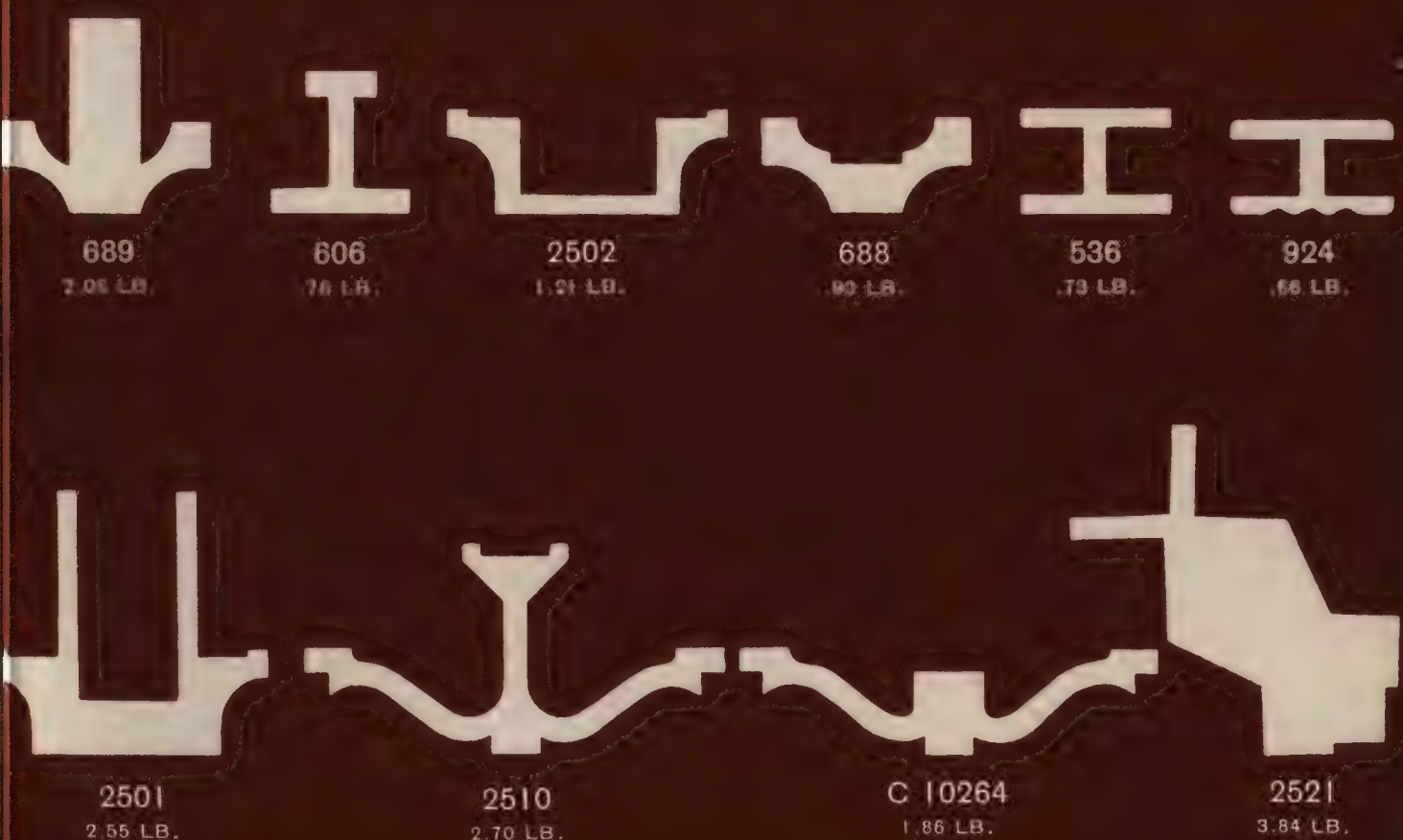
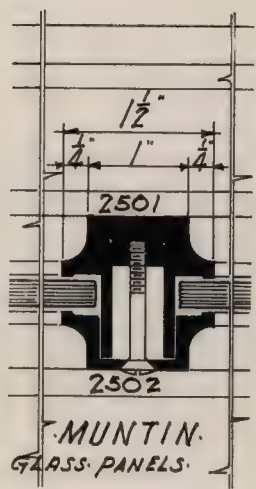


STORE FRONT AND GRILLE MUNTINS

LEFT. This detail illustrates standard shape No. 2521 used as a corner muntin in a store front assembly. Note particularly the pitch of the reveal as this is the angle in which the standard shape is available.

RIGHT. An illustration of Chase Standard Shapes 2501 and 2502 used as muntin constructions for windows. For complete assembly refer to page 49 and 50.

Shapes 2510 and C 10264 are detailed on page 29.



[illegible]

Shape 2228 illustrated below is detailed on page 33.





This is one of a group of store fronts constructed entirely of Chase Standard Extruded Bronze Sections. The trim, modern appearance of this store front is due entirely to smartly designed extruded bronze shapes. The complete detail drawing is reproduced on page 35.

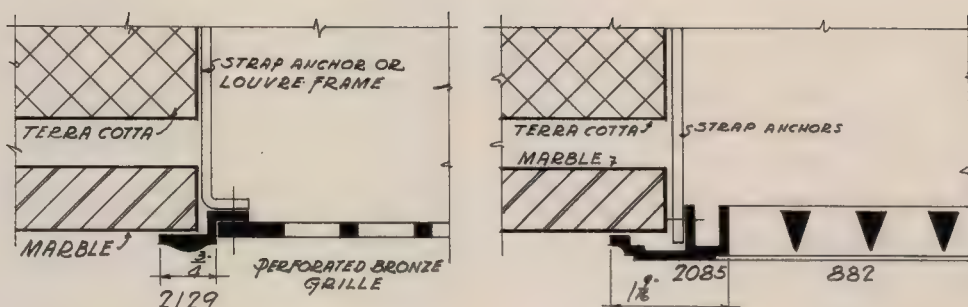
Shape 2520....page 31 Shape 2515....page 11

Shape 2521....page 34 Shape 2524....page 23

Shape 2522....page 23 Shape 2516....page 10

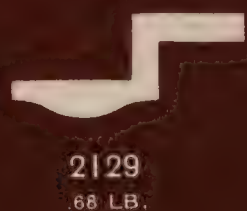
Shape 2569 is detailed on page 30.

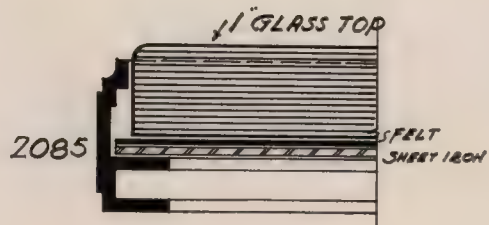




SUGGESTIONS FOR ASSEMBLING STATIONARY BRONZE GRILLES AND FRAMES USING CHASE STANDARD SHAPES.

Shape 882 is illustrated on page 8.





CHECK DESK EDGE
This drawing illustrates the use of Chase Standard Shape No. 2085 as an edging for a bank check-desk. It is also used for a grille frame as illustrated on page 37.

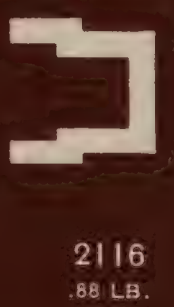


HINGED GRILLE
Suggestion for assembling Hinged Bronze Grilles using standard frames and spindles. Shape 362 is illustrated on page 6. Shape 2092 is illustrated on page 30.

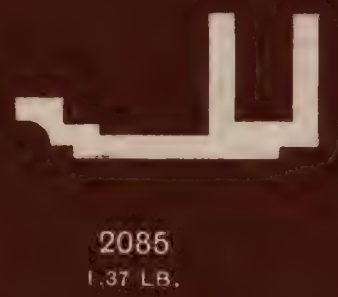
Shape 2220 is detailed on page 15.



2222
1.93 LB.



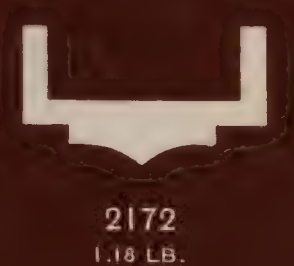
2116
.88 LB.



2085
1.37 LB.



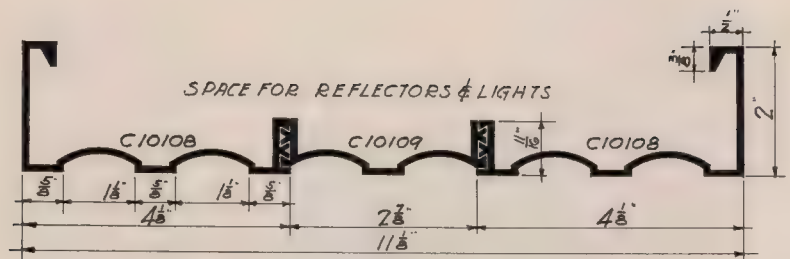
2171
1.56 LB.



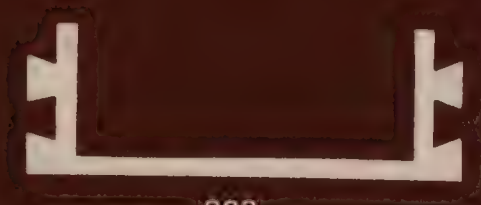
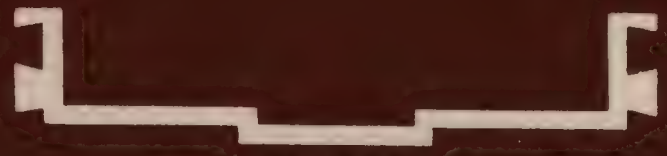
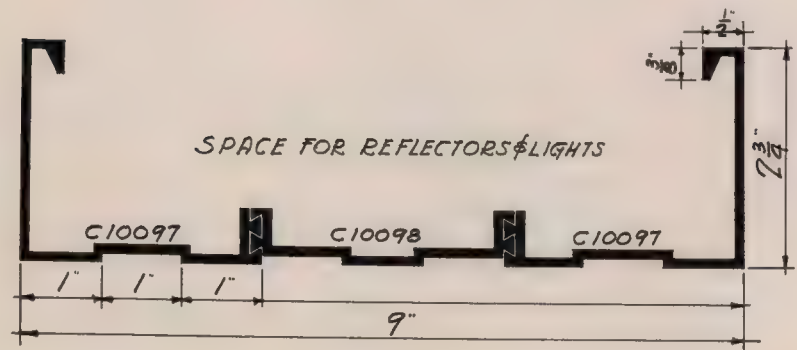
2172
1.18 LB.

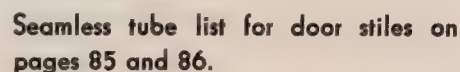


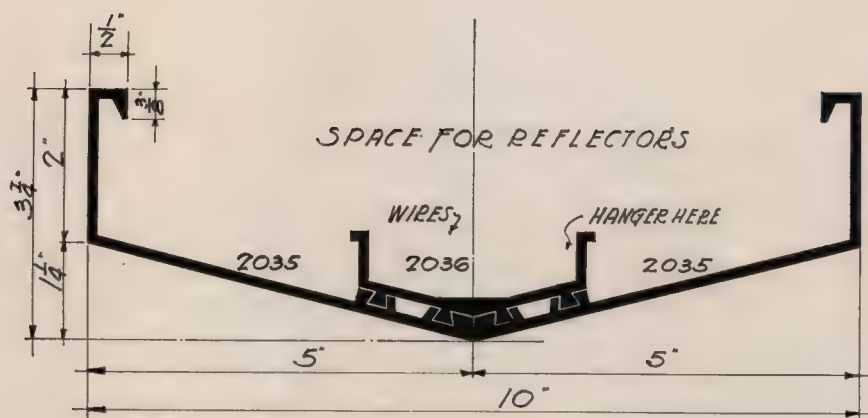
2220
1.16 LB.



Details showing the application of Chase Standard Shapes No. C 10097, C 10098, C 10108 and C 10109 for indirect lighting troughs. These sections can also be used as pilasters for entrance doorways, etc.

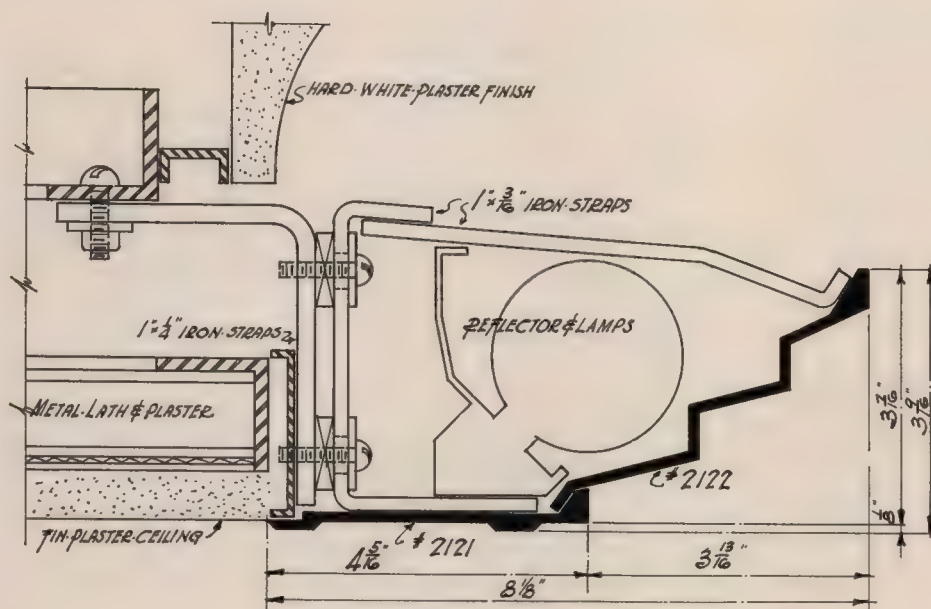






Here again the shapes assembled to make the indirect lighting trough can be utilized for other purposes such as Jambs, Mullions, etc., by the addition of other standard shapes for Jambs and trim.





This detail shows the assembly of standard shapes to create a bronze cornice housing an indirect lighting system. Its simplicity and effectiveness is in keeping with good architectural design.



2121
2.64 LB.



2036
2.25 LB.



2122
3.09 LB.



MISCELLANEOUS SHAPES

When the architectural designer or metal craftsman is unable to find under its own heading the shape that is needed for an installation it would be well to look over all of the pages of miscellaneous shapes. If he is able to find one that will serve the purpose both a saving in time and cost is effected. For example shape No. 931, page 44, has been used effectively as a panel moulding. Shape No. 935, page 44, is used both as a window stool nosing and a bronze trim.



889

.46 LB.



104

.65 LB.



C 10202

.63 LB.



379

.18 LB.



562

.22 LB.



585

.57 LB.



586

.63 LB.



739

2.50 LB.



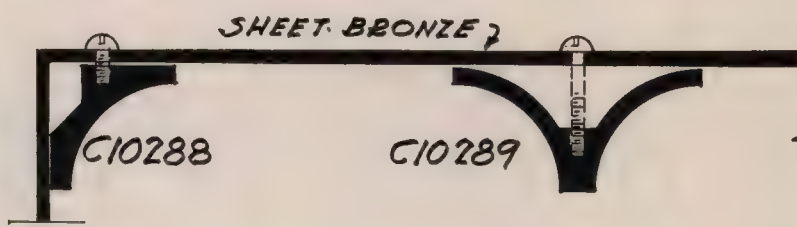
C 10110

1.44 LB.



420

3.04 LB.



Chase Standard Shapes No. C 10288 and C 10289 should be particularly effective on an exceptionally wide cornice or Jamb where a series of lines either horizontal or vertical are desired. The construction of these shapes permits the fabricator to secure them to a sheet back with concealed fastenings as illustrated.

Shape 2519 below is detailed on page 35.



C 10288
.69 LB.



C 10289
1.14 LB.



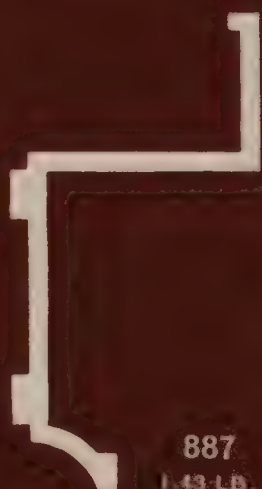
C 10183
.57 LB.



2519
.84 LB.



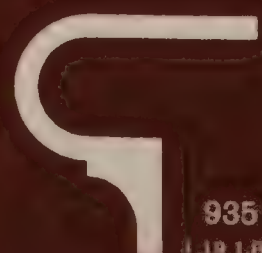
931
.94 LB.



887
1.43 LB.



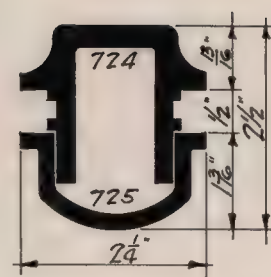
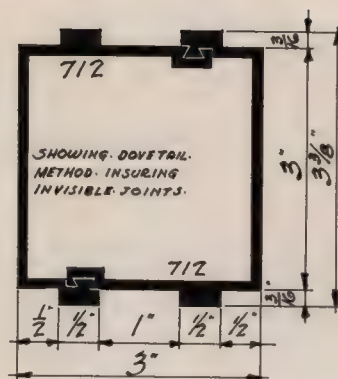
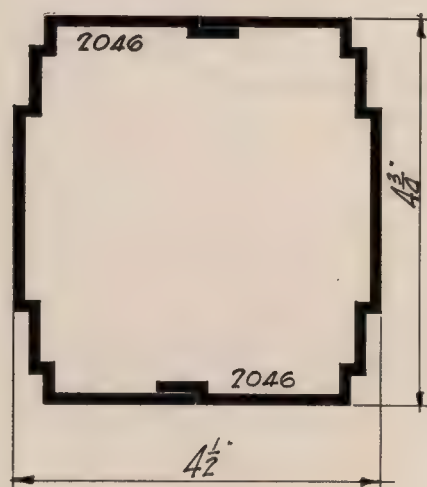
669
1.42 LB.



935
1.19 LB.

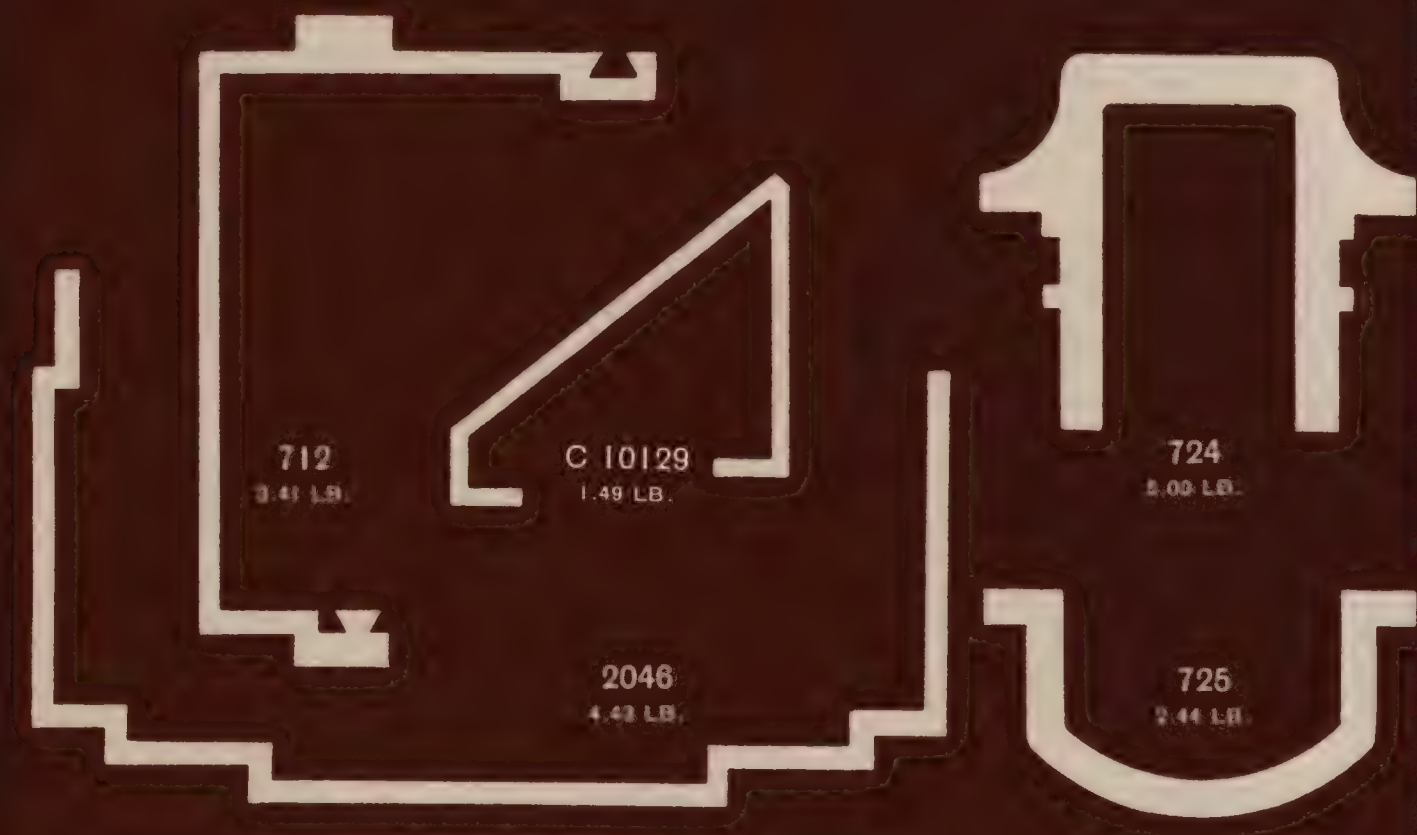


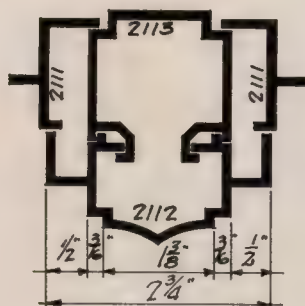
148
.95 LB.



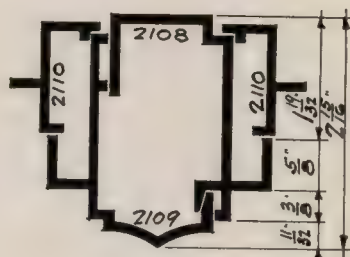
REVERSIBLE SHAPES

Single shapes designed as reversible to make complete closed units should in our opinion be designed for the dove tail or similar method of joining. This method has proven to be the most economical way of assembling these units.

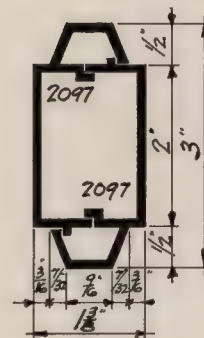




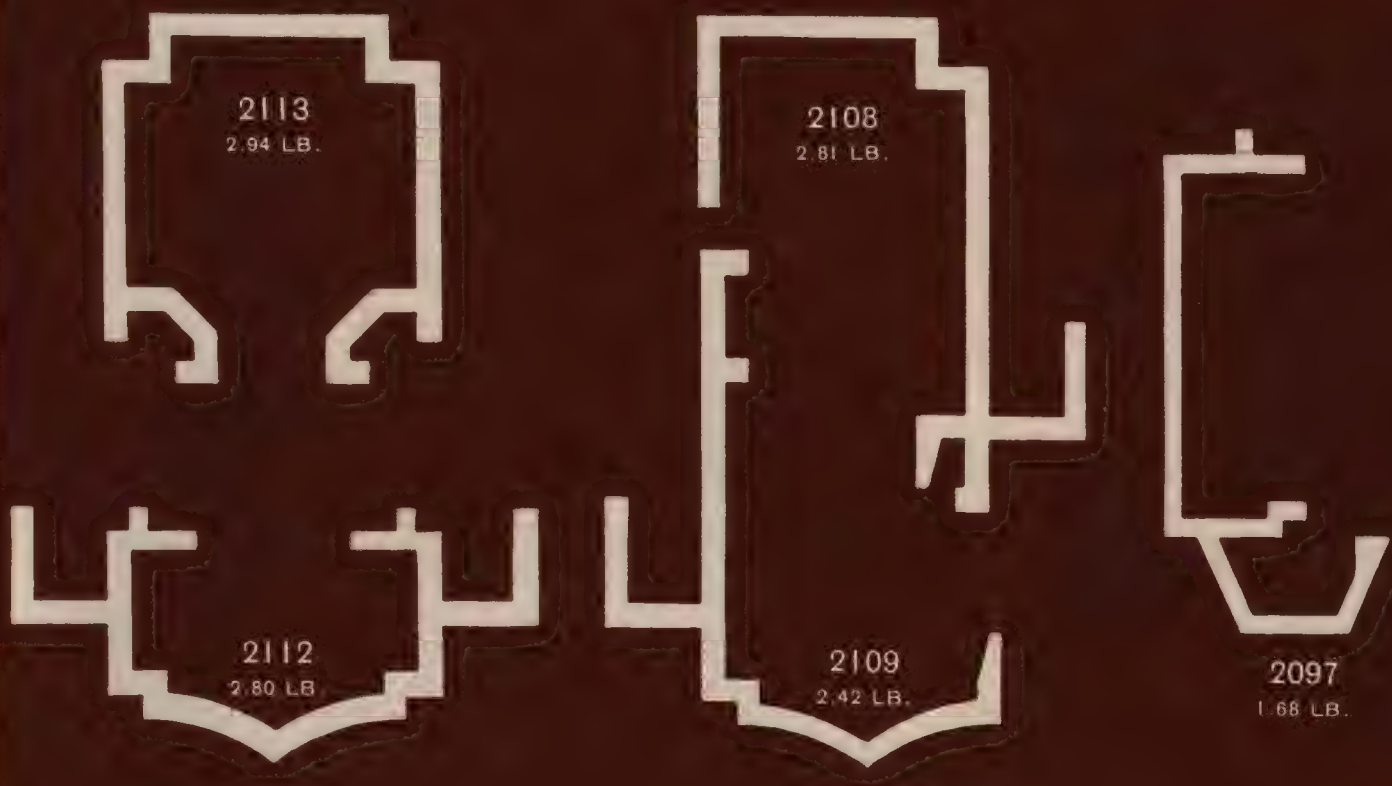
MULLION SECTION

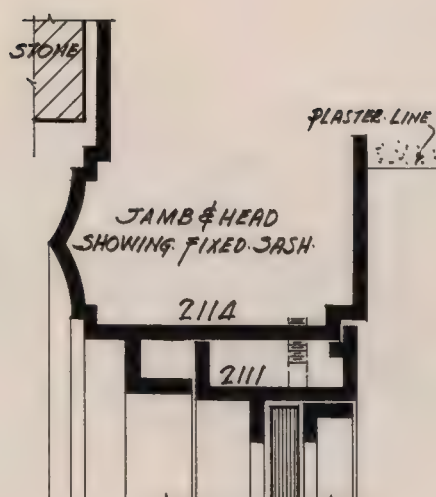
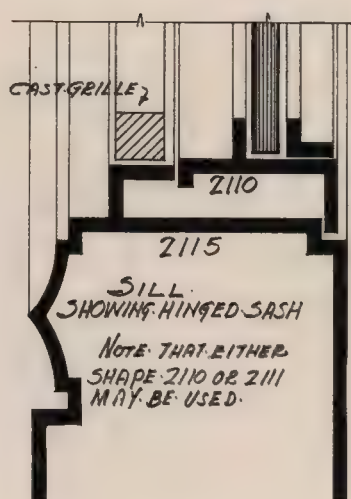


DIVIDED MULLION SECTION

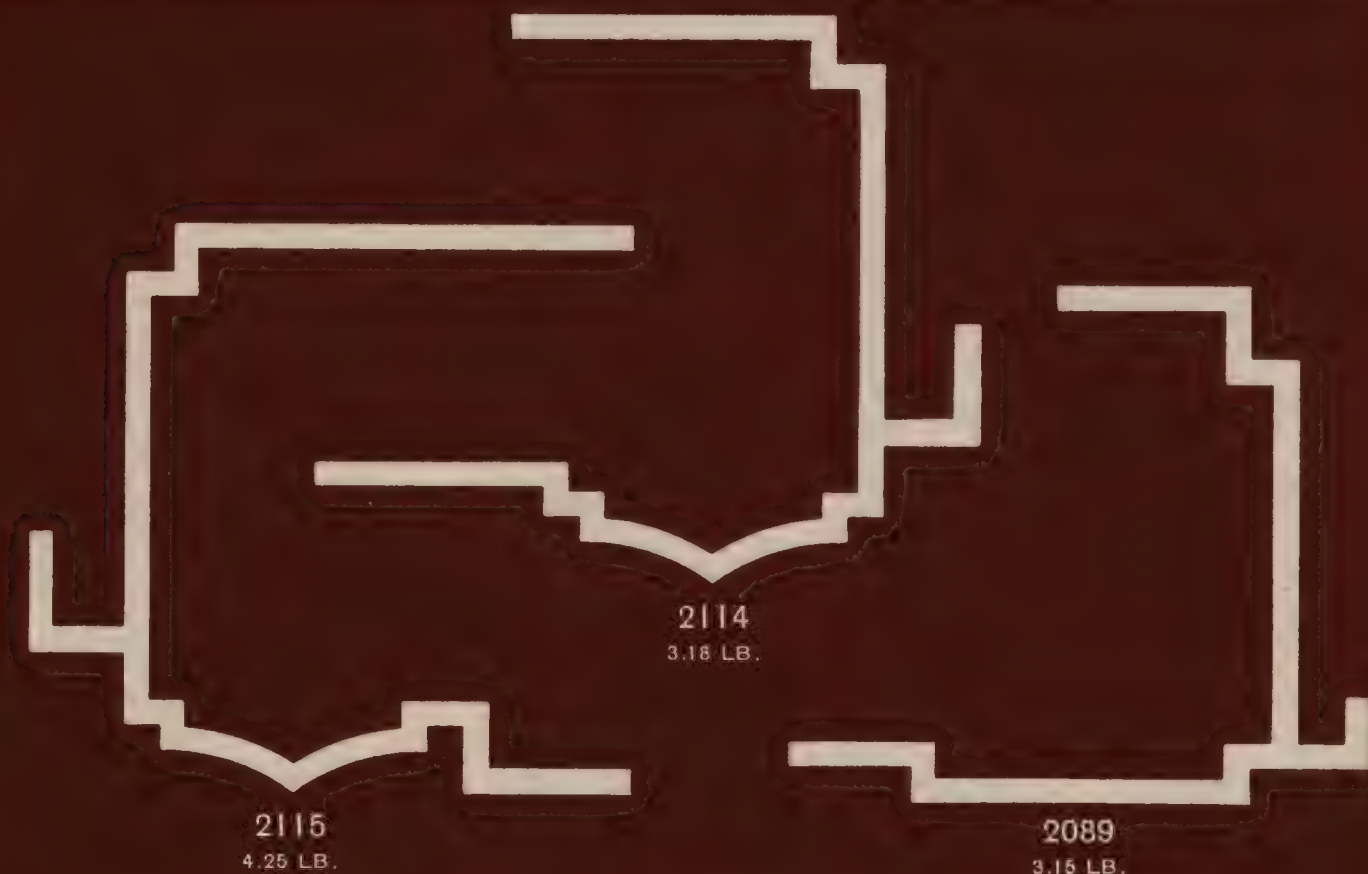


The center section was designed in this manner to provide a practical field joint for an extra wide screen when it is impractical to ship and erect in one piece. For example see the illustration of the Bronze Screen on page 48. Shape 2110 is used when stationary sash is required. Shape 2111 is used only where hinged sash is required. NOTE: The shapes illustrated on page 47 are similar in design and can be used for jamb and sill mouldings in conjunction with the shapes illustrated here.

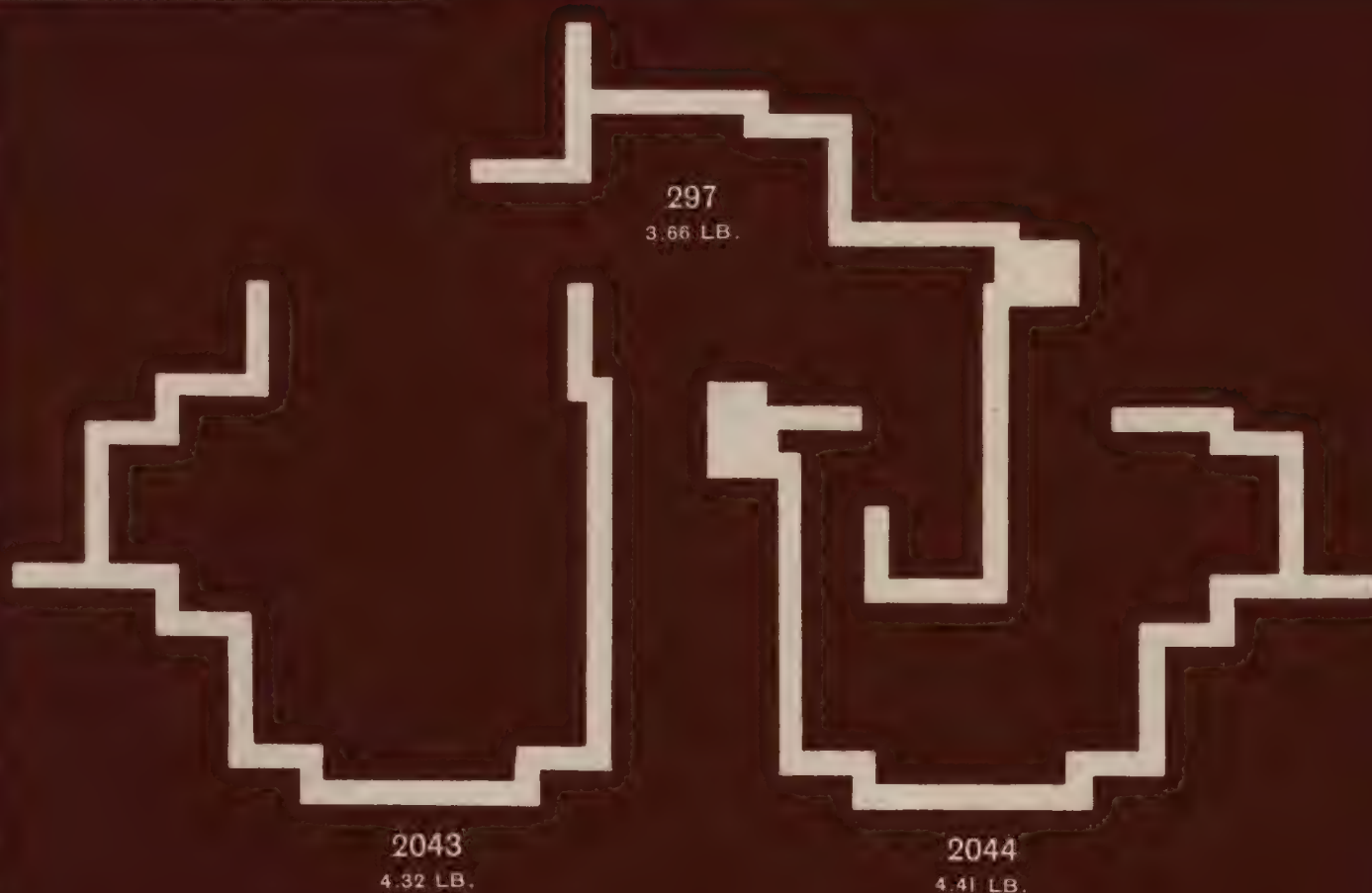


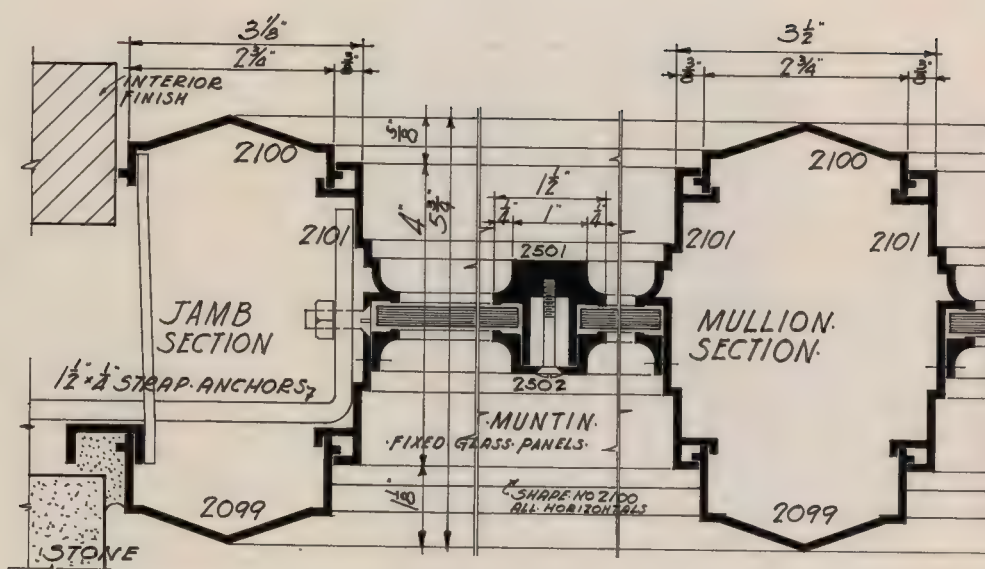


NOTE: Shapes No. 2114 and 2115 were used as jamb and sill member for the screen illustrated on page 48. Shapes Nos. 2110 and 2111 used in the above details are illustrated on page 52. Shapes Nos. 2108, 2109, 2112 and 2113 illustrated on page 46 can be used as either vertical or horizontal muntins with the above shapes.

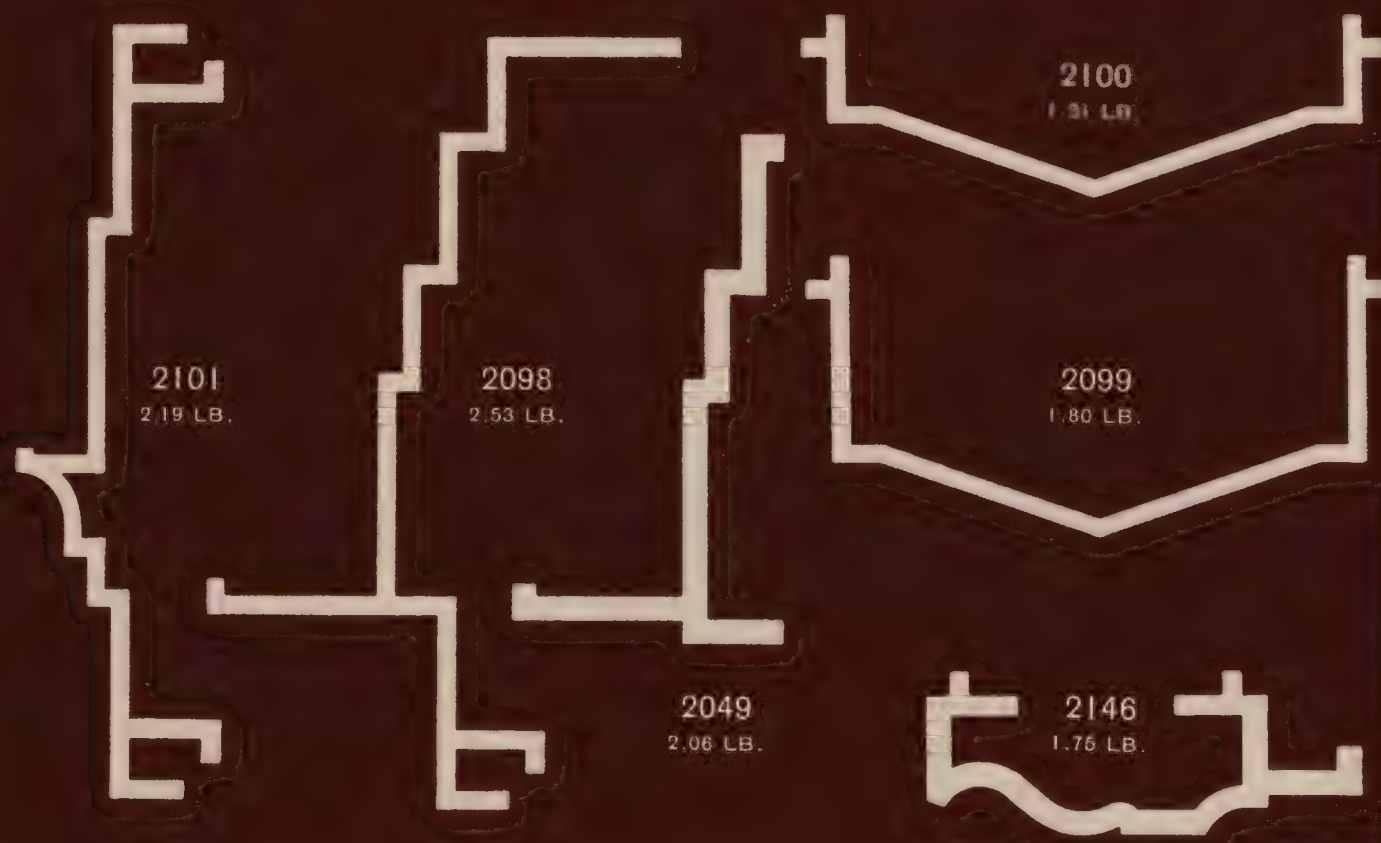


This Bronze Screen is constructed almost entirely of Chase standard extruded bronze shapes. The muntins and jambs are detailed on pages 46 and 47. The frames for the package windows where no glass or grille is used were constructed of shapes 2146 and 2147 illustrated on page 50. The details through the sill and jamb are illustrated on page 47.





NOTE: The above detail is a plan section through the window illustrated on page 50. Shapes Nos. 2501 and 2502 are illustrated on page 34.





This bronze window measures 15' 0" wide by 33' 0 $\frac{1}{4}$ " high. The extruded bronze sections used to make up this complete unit average about .093 ($\frac{3}{32}$ ") thick. It is a good example of the strength of Chase Extruded Bronze Shapes for architectural treatment.

The detail drawing is reproduced on page 49.

Shapes C 10177-1 and C 10177-2 make up a complete mullion.

Shape 2146 illustrated on page 49 is used with shapes 2117 and 2147.

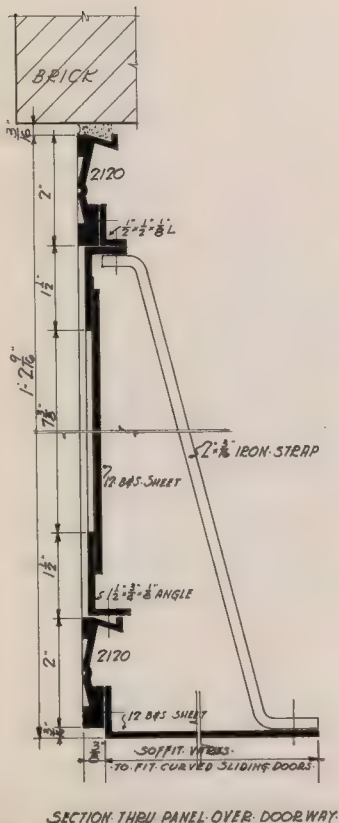
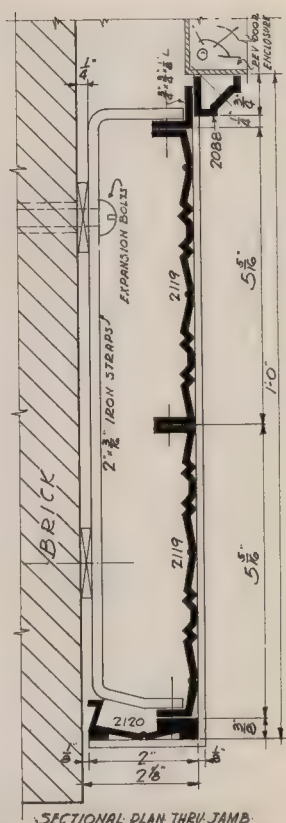


C10177-1
4.20 LB.

C 10177-2
4.39 LB.

2117
4.75 LB.

2147
2.87 LB.



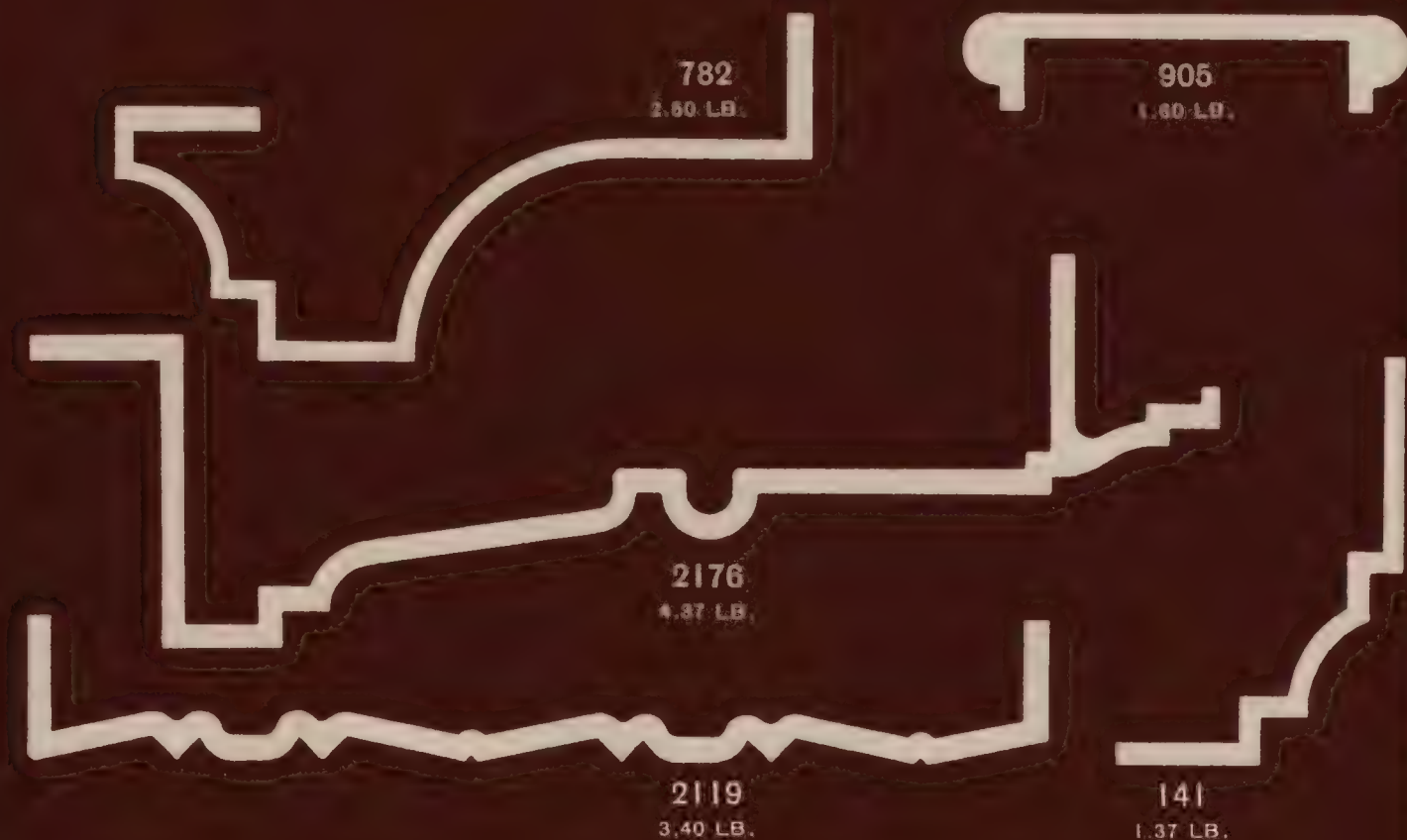
SECTIONAL PLAN Thru Jamb.

A detail drawing of the jamb used for the bronze doorway illustrated on page 52. It is constructed of Chase Standard Shapes No. 2088, 2119 and 2120.

Shape No. 2088 is illustrated on page 31. Shape No. 2120 is illustrated on page 25.

SECTION Thru Panel over Doorway.

The head panel over doorway illustrated on page 52 is constructed of Chase Standard Shape No. 2120 in combination with Chase Standard Angles and Muntz Metal sheet. The soffit was formed of Muntz Metal sheet and cut out to fit the curve of the revolving door.





This revolving door entrance is constructed entirely of Chase Standard Extruded Bronze Shapes. The detail drawings are reproduced on page 51. Illustration of Shapes 2110 and 2111 shown on pages 46, 47, 48.



496
.22 LB.



731
.67 LB.



837
.69 LB.



877
.42 LB.



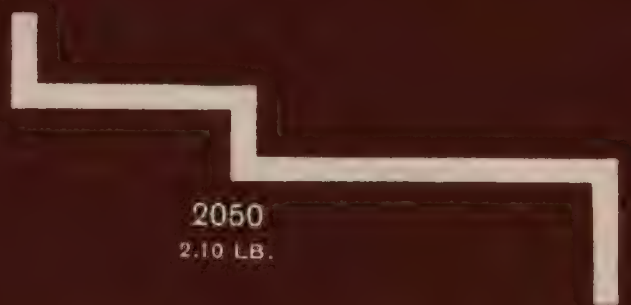
878
.36 LB.



879
.44 LB.



2110
1.16 LB.



2050
2.10 LB.



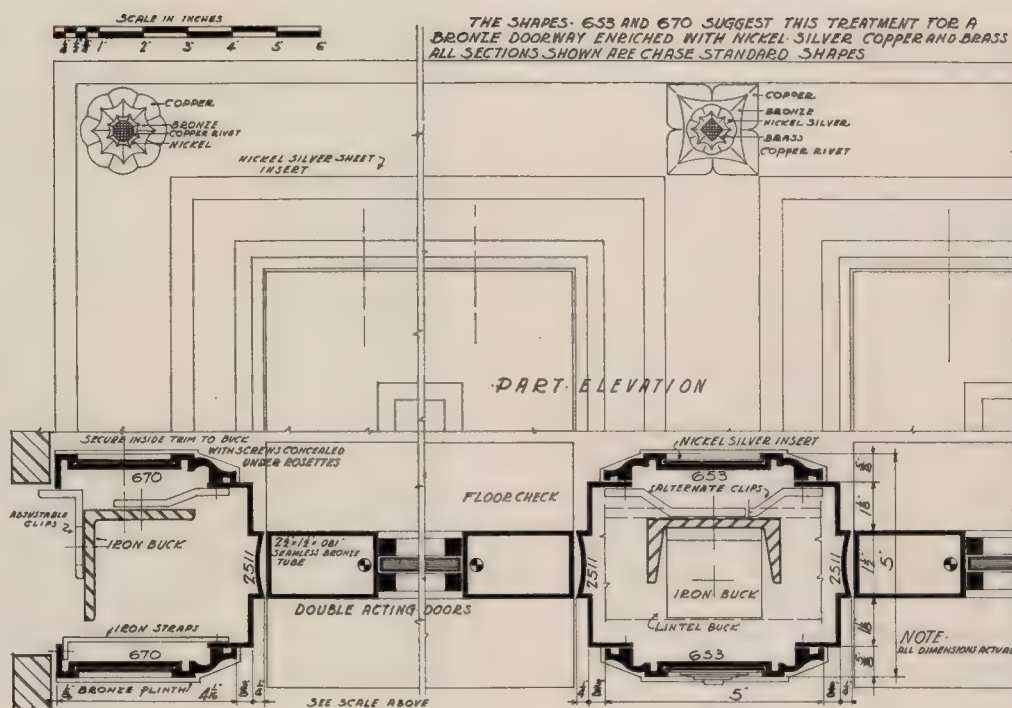
2111
1.56 LB.



408
1.44 LB.



781
2.09 LB.



Shape 2511 is illustrated on page 12.



C 10096

1.49 LB.



670

1.87 LB.

653

2.92 LB.



C 10141

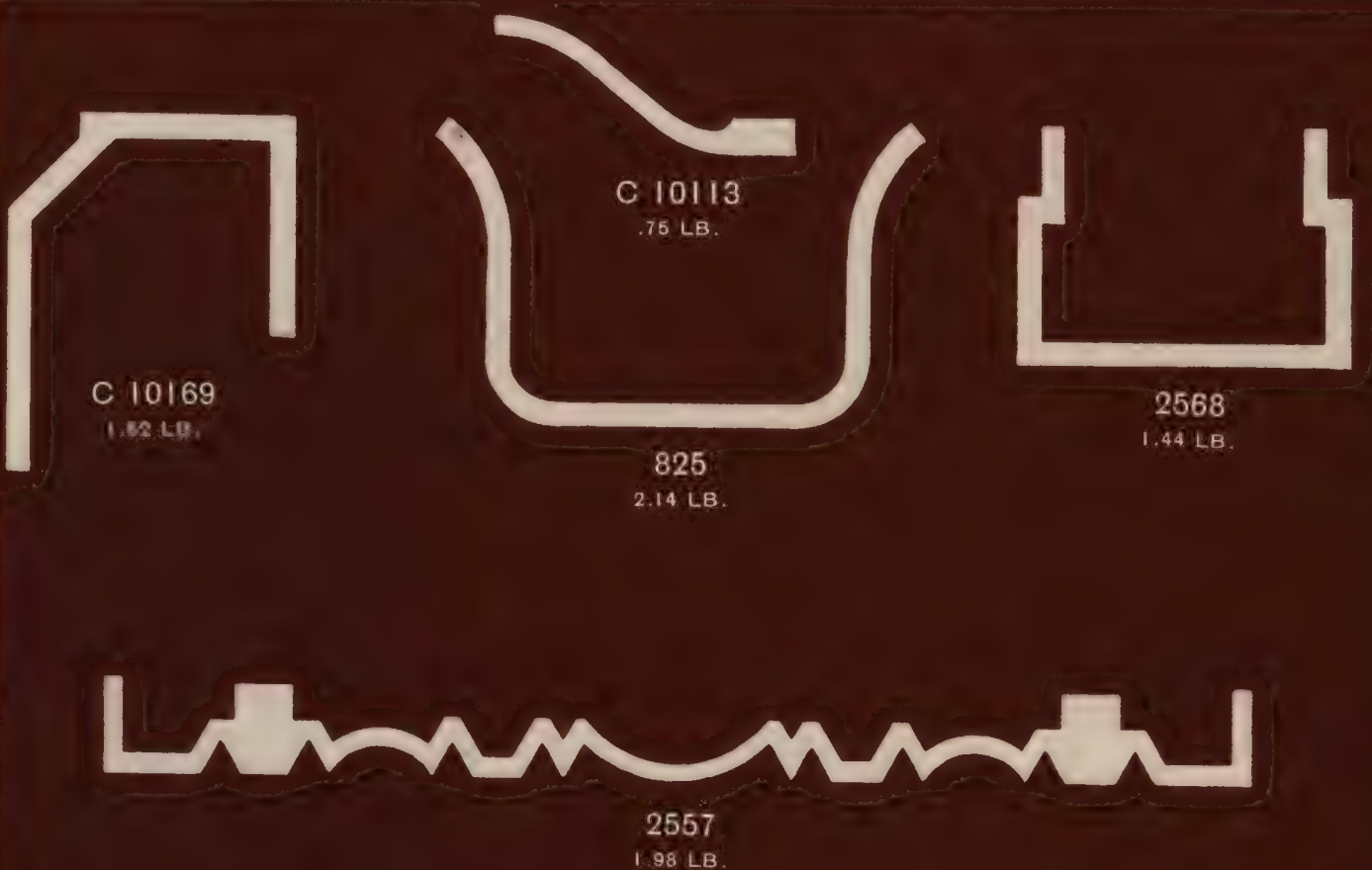
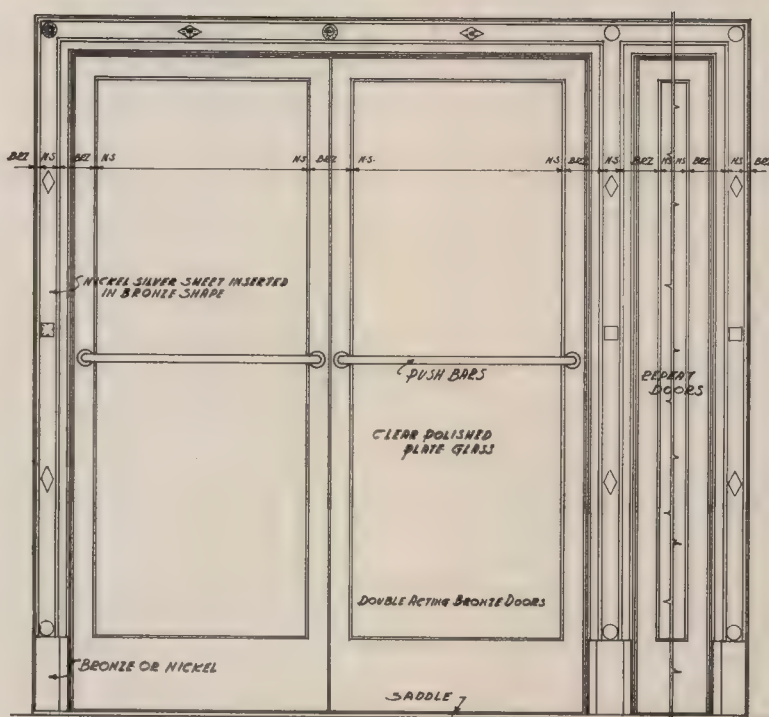
1.19 LB.



2556

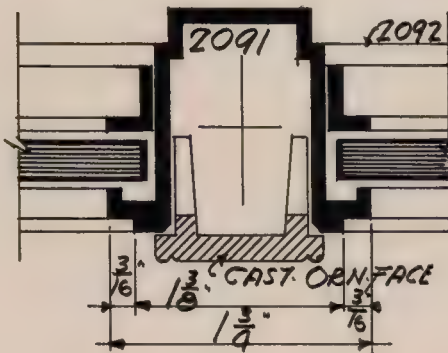
1.89 LB.

This drawing illustrates in scale elevation the bronze work detailed on page 53. Notice particularly the ease of applying nickel sheet to the bronze work. The sheet fits into the slots or grooves provided on shapes 653 and 670 eliminating the possibility of open joints which might occur on sunk panel installations. The rosettes are constructed of thin gauge metal and built up, alternating the metals, to produce attractive color effects.



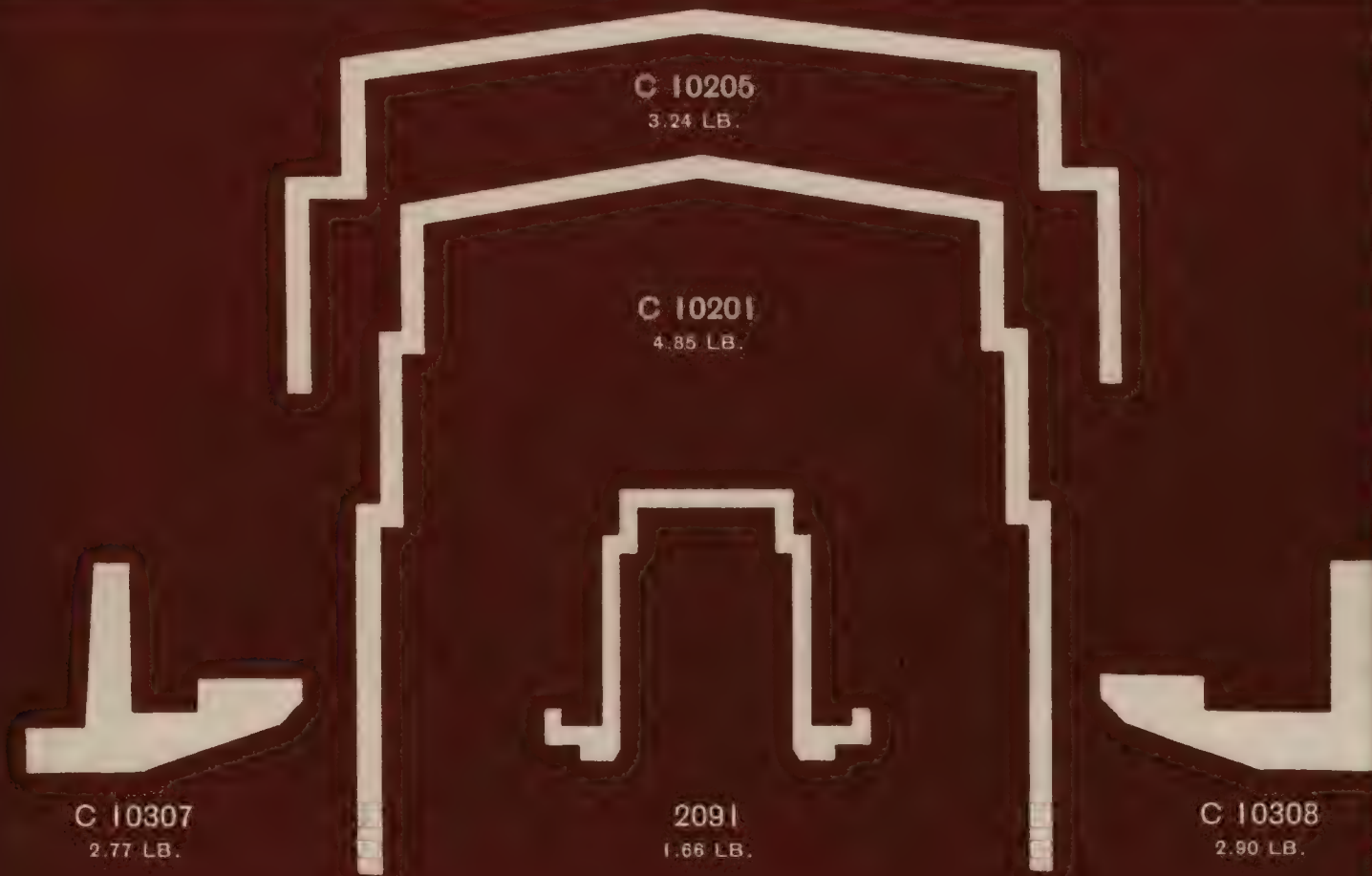


BRONZE COUNTER SCREEN



This detail is a full size section through a typical pilaster of the bronze counter screen illustrated on page 56.

The top rail of this counter screen is constructed of Chase Standard Shape No. 2090 illustrated on page 33. The glass frames are constructed of Chase Standard Shape No. 2092 illustrated on page 29.

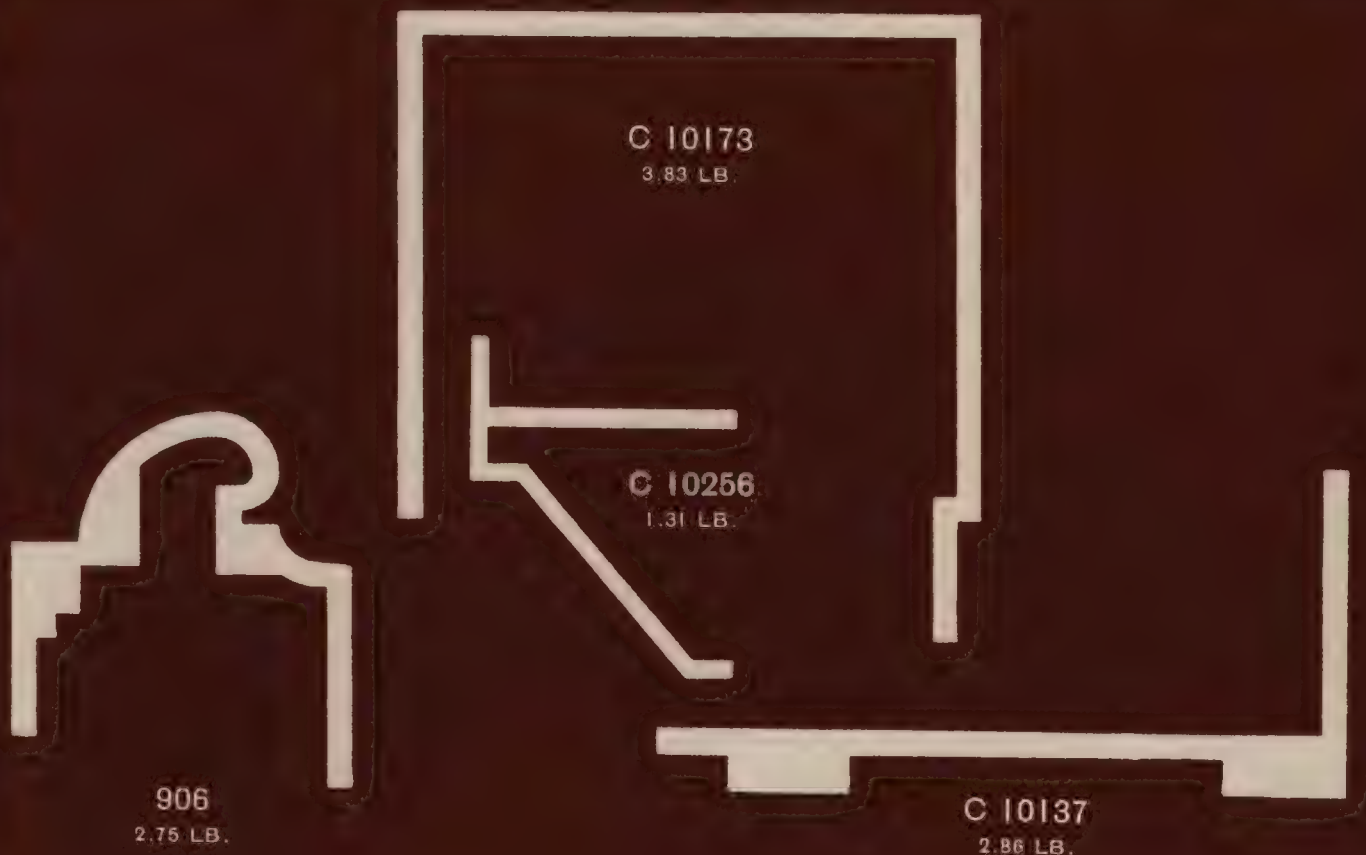


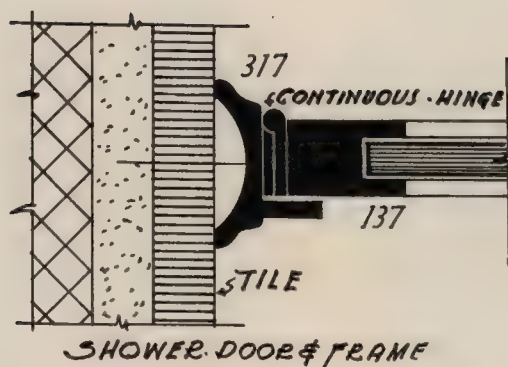
ALL SECTIONS ARE DRAWN TO ACTUAL SIZE—ALL WEIGHTS LISTED ARE IN POUNDS PER LINEAL FOOT



This bronze counter screen is constructed entirely of Chase Standard Extruded Bronze Shapes except the face and caps of the pilasters which are ornamental cast bronze as indicated. A full size section through a typical pilaster is detailed on page 55.

Shape C 10173 is a reversible shape.





Detail drawing showing the construction of shower frame and door illustrated on page 58. The frame in this case is Chase Standard Shape No. 317. Shape No. 137 is illustrated on page 59.



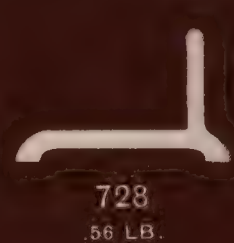
2552
.63 LB.



2553
.50 LB.



701
.57 LB.



728
.56 LB.



233
.62 LB.



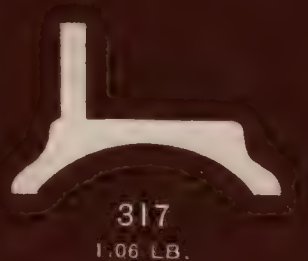
643
.69 LB.



926
.69 LB.



534
.86 LB.



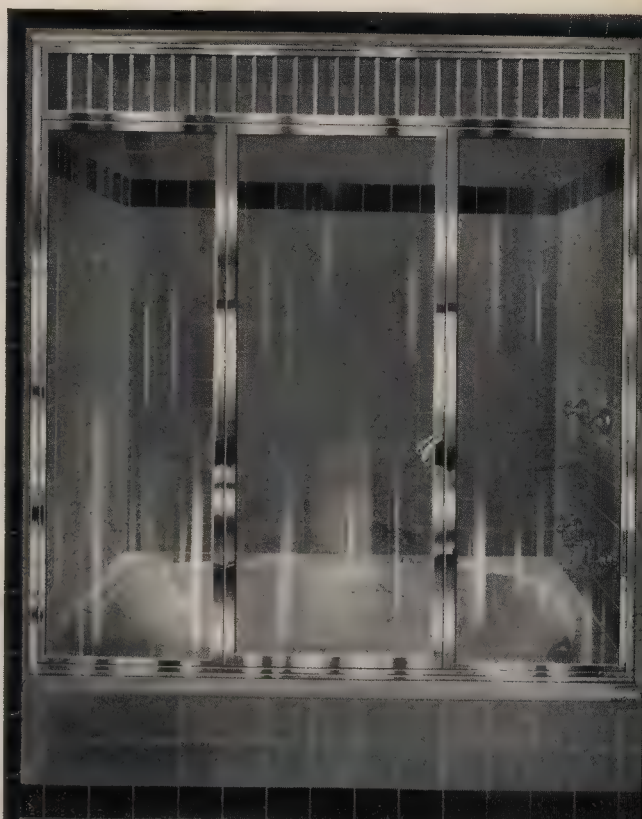
317
1.06 LB.



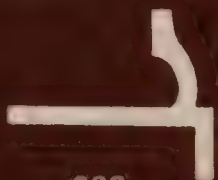
925
.78 LB.



Modern architectural design favors the use of glass shower doors and enclosures. The shower door illustrated here is constructed of Chase Standard Extruded Bronze Shapes. Refer to page 57 for detailed construction through door and frame.



727
1.09 LB.



888
.66 LB.



927
.51 LB.



707
.95 LB.



319
1.02 LB.



454
.73 LB.



453
.94 LB.



704
.49 LB.



705
.69 LB.



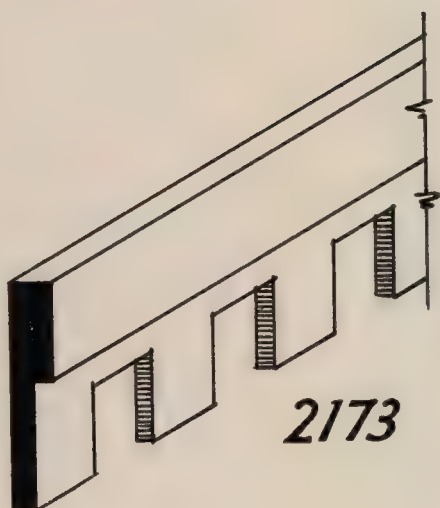
306
.65 LB.



662
.62 LB.

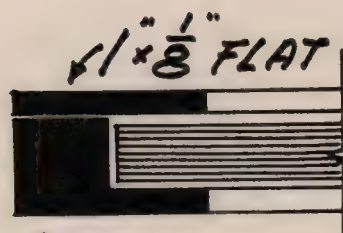


399
1.06 LB.



2173

A detail drawing showing the method of producing a dentil course using standard extruded bronze shape No. 2173, page 60.



61

This detail drawing illustrates how these miscellaneous shapes can be used as small glass frames. They are usually used in back of grilles on entrance doors, etc. Chase Standard Shape No. 61, page 60, was used in this detail.



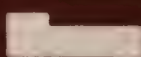
40

.66 LB.



222

.42 LB.



49

.46 LB.



411

.36 LB.



127

.75 LB.



6

.33 LB.



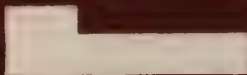
24

.40 LB.



38

1.15 LB.



23

1.36 LB.



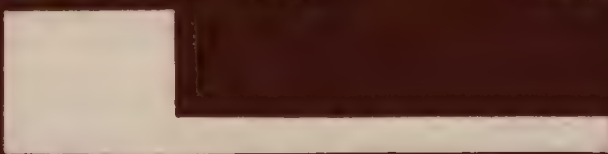
133

1.40 LB.



172

1.73 LB.



119

3.97 LB.



4

2.25 LB.



137

1.39 LB.



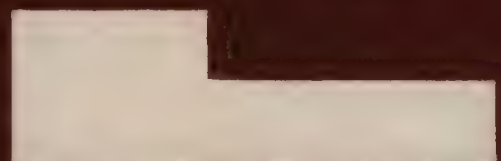
65

4.49 LB.



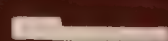
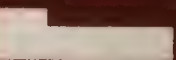






5

2.82 LB.



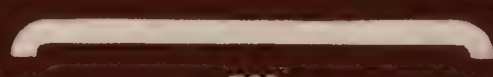
66

5.38 LB.

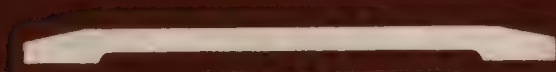
					
698 .85 LB.	231 .79 LB.	246 .22 LB.	333 .48 LB.		
					
22 .85 LB.	48 .73 LB.	39 .73 LB.	159 1.28 LB.	840 1.17 LB.	
					
168 1.79 LB.	3 1.47 LB.	61 1.15 LB.	177 .89 LB.		
					
63 .78 LB.	2173 .88 LB.	412 .61 LB.	459 1.09 LB.	768 .94 LB.	
					
62 .88 LB.	125 1.05 LB.	60 1.28 LB.	64 1.48 LB.	136 1.41 LB.	
					
C 10257 .54 LB.	C 10323 1.20 LB.	164 .81 LB.	192 .70 LB.	171 .76 LB.	
					
C 10202 .63 LB.	506 .45 LB.	489 .44 LB.	750 .94 LB.	490 .74 LB.	273 .75 LB.



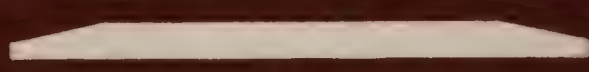
552
1.00 LB.



769
1.15 LB.



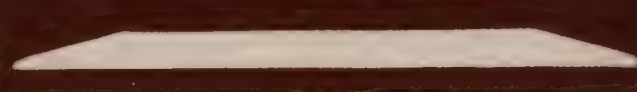
942
1.30 LB.



721
1.75 LB.



699
2.66 LB.



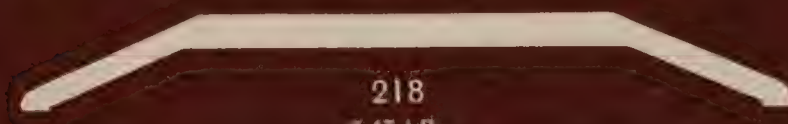
589
1.85 LB.



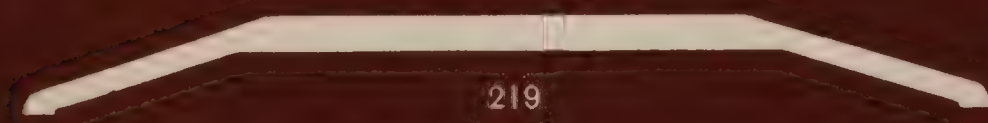
729
2.25 LB.



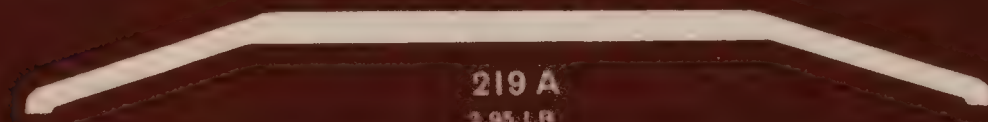
218 A
1.67 LB.



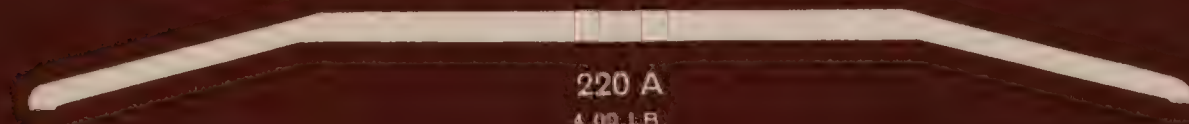
218
1.47 LB.



219
3.25 LB.



219 A
3.95 LB.



220 A
4.00 LB.



220
4.36 LB.



901
2.92 LB.



703
2.17 LB.



344
1.76 LB.



507
2.94 LB.



930
2.00 LB.



215 A
2.78 LB.



215
3.00 LB.



659
2.80 LB.



665
3.12 LB.



216 A
3.06 LB.

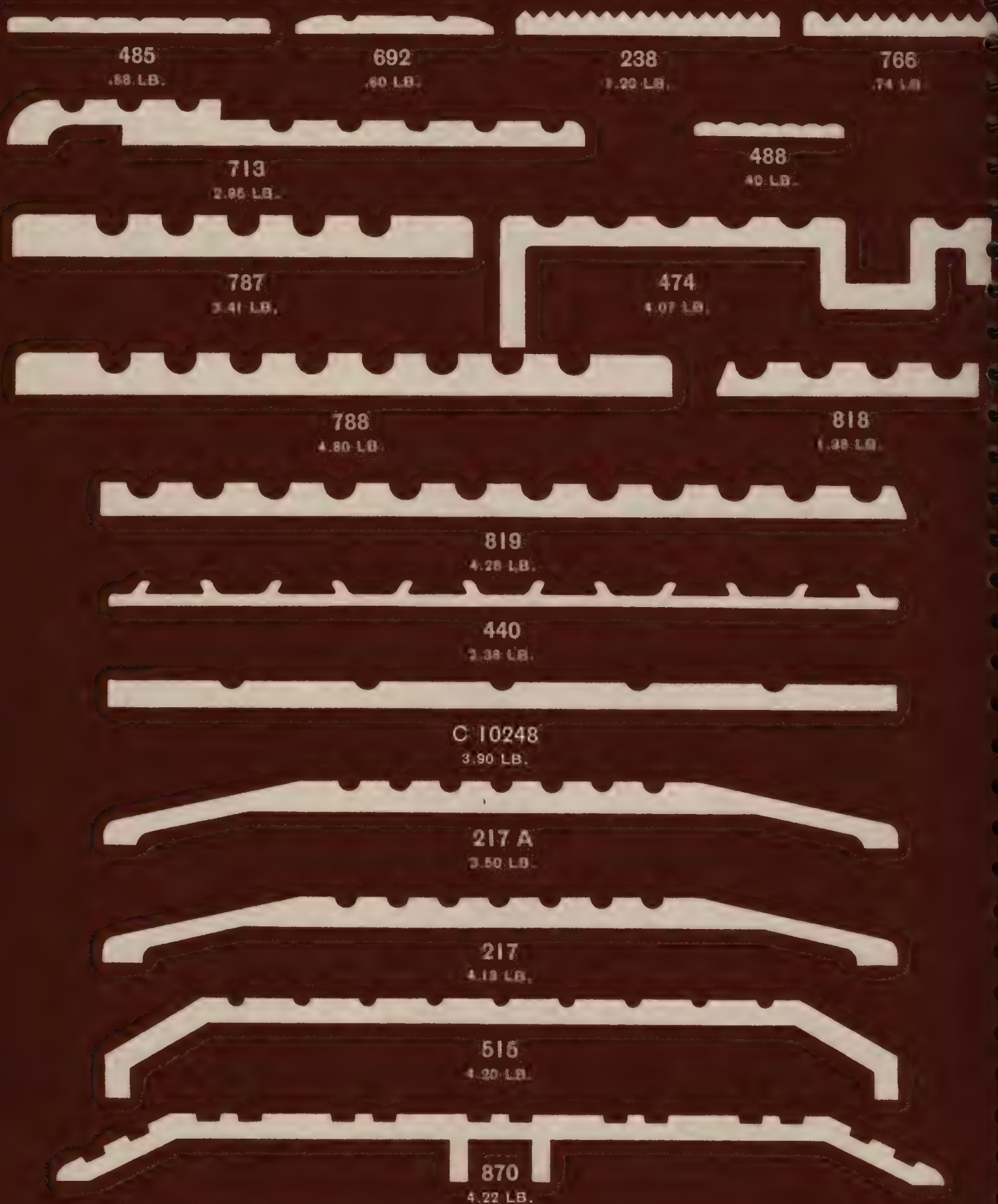


216
3.85 LB.



345
3.46 LB.

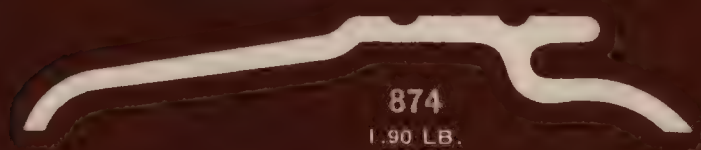
ALL SECTIONS ARE DRAWN TO ACTUAL SIZE—ALL WEIGHTS LISTED ARE IN POUNDS PER LINEAL FOOT



ALL SECTIONS ARE DRAWN TO ACTUAL SIZE—ALL WEIGHTS LISTED ARE IN POUNDS PER LINEAL FOOT



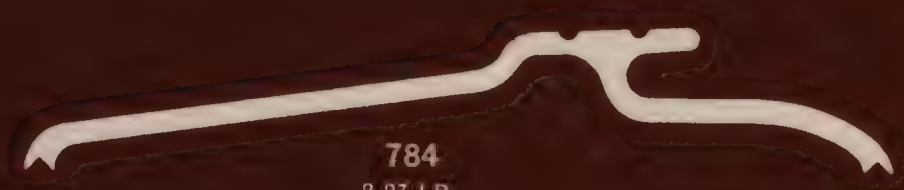
ALL SECTIONS ARE DRAWN TO ACTUAL SIZE—ALL WEIGHTS LISTED ARE IN POUNDS PER LINEAL FOOT



874
1.90 LB.



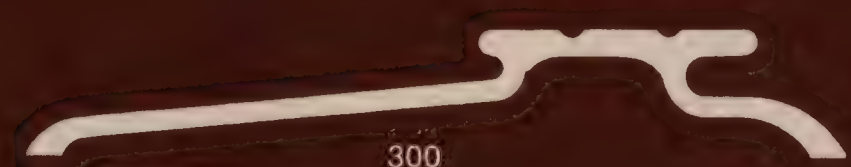
288
1.77 LB.



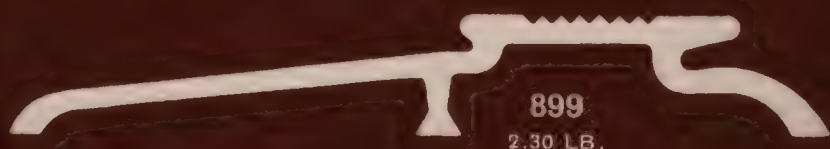
784
2.27 LB.



221
2.25 LB.



300
2.20 LB.



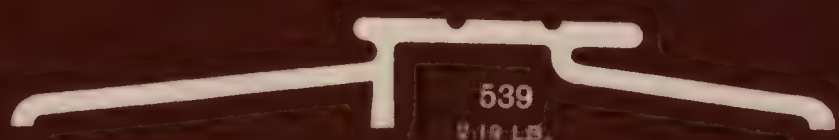
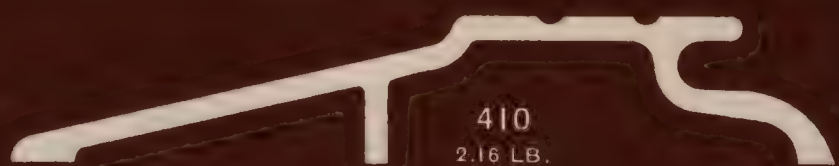
899
2.30 LB.



324
1.70 LB.



452
1.92 LB.





204

.96 LB.



214

.70 LB.



860

.12 LB.



556

.33 LB.



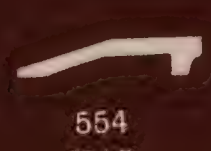
555

.23 LB.



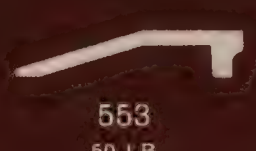
557

.18 LB.



554

.29 LB.



553

.60 LB.



900

.15 LB.



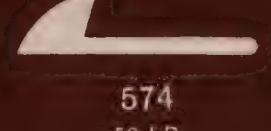
576

.24 LB.



575

.44 LB.



574

.52 LB.



856

.75 LB.



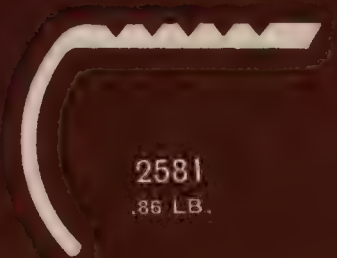
252

.71 LB.



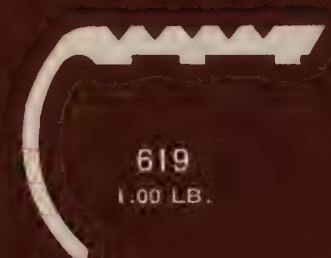
396

.78 LB.



2581

.86 LB.



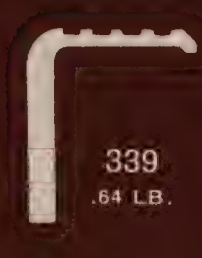
619

1.00 LB.



338

.80 LB.



339

.64 LB.



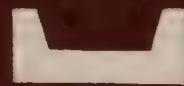
907
.44 LB.



770
.28 LB.



278
.44 LB.



C 10029
.76 LB.



767
.70 LB.



779
.86 LB.



146
2.23 LB.



272
2.28 LB.



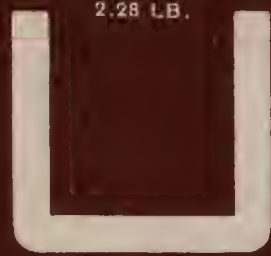
702
.22 LB.



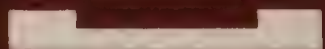
372
.70 LB.



185
1.50 LB.



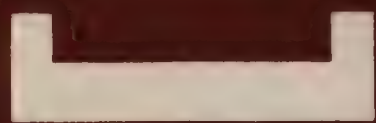
790
2.31 LB.



435
.95 LB.



274
1.45 LB.



346
2.67 LB.



479
4.03 LB.



330
6.39 LB.

829

7.87 LB.



590

.40 LB.



492

.44 LB.



696

1.38 LB.



747

1.23 LB.



613

1.46 LB.



545

.36 LB.



35

.45 LB.



36

.58 LB.



74

.95 LB.



364

.73 LB.



812

.46 LB.



608

.62 LB.



730

1.04 LB.



182

1.02 LB.



776

1.83 LB.



478

1.98 LB.



482

3.75 LB.



C 10207

.26 LB.



621

.31 LB.



131

1.15 LB.



376

1.61 LB.



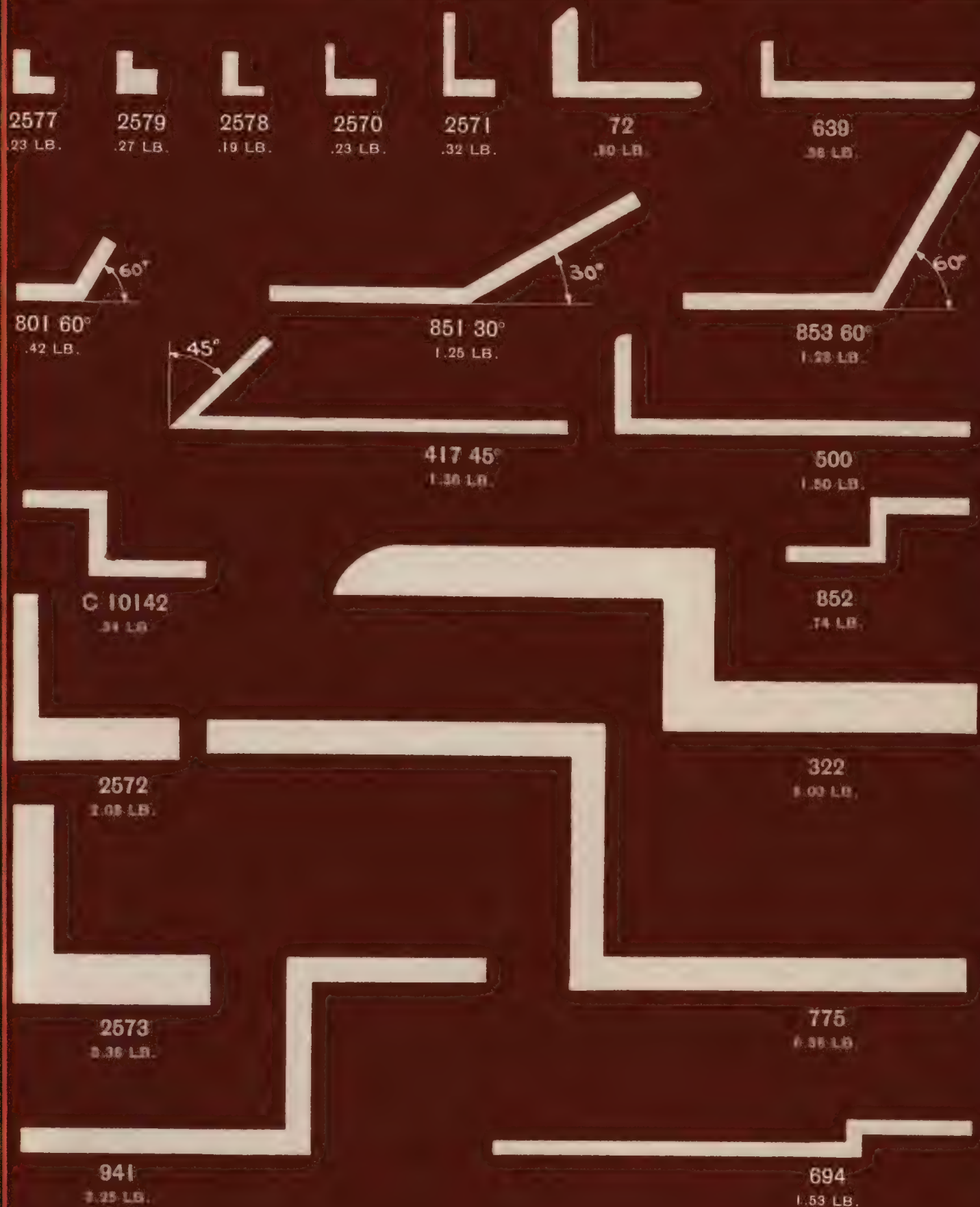
831

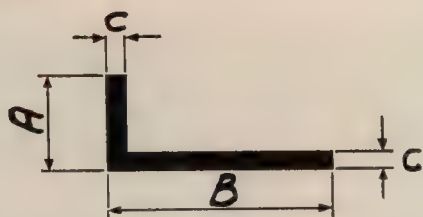
6.40 LB.



963

.80 LB.





Special Angles and Channels are illustrated on page 70.
R. C. = Round Corners.

WEIGHTS LISTED ARE APPROXIMATE WEIGHTS PER LINEAL FOOT

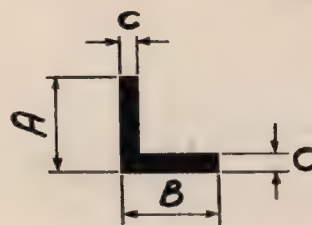
A	B	C	Weight	MEMO	A	B	C	Weight	MEMO
3/8	3/4	1/8	.460		1	1 1/2	1/8	1.093	
1/2	5/8	1/8	.460		1	2	1/8	1.324	
1/2	7/8	1/8	.576		1	2	3/16	1.943	
1/2	1	1/8	.634		1	2	1/4	2.53	
1/2	1 1/2	1/8	.864		1	3	1/8	1.785	
1/2	1 1/2	3/16	1.252		1 1/8	1 1/2	1/8	1.150	
1/2	4	1/8	2.015		1 1/8	1 3/4	1/8	1.266	
9/16	1 1/16	1/8	.461		1 1/4	1 1/2	1/8	1.21	
9/16	1 7/8	1/8	1.065		1 1/4	1 1/2	1/4	2.30	
9/16	1 15/16	1/8	1.094		1 1/4	1 3/4	1/8	1.32	
5/8	3/4	1/8	.576		1 1/4	1 3/4	3/16	1.943	
5/8	1	1/8	.691		1 1/4	1 3/4	1/4	2.53	
5/8	1 1/2	1/8	.921		1 1/4	2	1/8	1.44	
5/8	2 3/8	1/8	1.324		1 1/4	2	1/4	2.76	
1 1/16	1	5/32	.863		1 1/4	2 1/2	1/8	1.67	
1 1/16	1 1/16	5/32	.90		1 1/4	2 1/2	1/4	3.22	
3/4	1 5/16	1/8	.72		1 1/4	3	1/8	1.90	
3/4	1	3/32	.561		1 1/4	3	3/8	5.36	
3/4	1	1/8	.749		1 1/4	4 5/8	3/16	3.92	
3/4	1	3/16	1.08		1 3/8	2 13/16	3/16	2.76	
3/4	1 1/8	3/16	1.17	R. C. also	1 7/16	3 3/8	1/8	2.16	
3/4	1 1/8	3/16	1.26	R. C. also	1 7/16	3 7/8	1/8	2.39	
3/4	2 1/4	1/8	1.324		1 1/2	2	1/8	1.55	
3/4	2 1/2	3/16	2.16		1 35/64	3 5/8	1/8	2.33	
3/4	2 11/16	1/8	1.526		1 5/8	2 3/4	1/8	1.96	
3/4	3 1/4	1/8	1.78		1 3/4	2	1/8	1.67	
3/4	4	3/16	3.15		1 7/8	2	1/4	3.33	
7/8	1	1/8	.806		2	2 1/2	1/8	2.02	
7/8	1 1/8	1/8	.864		2	2 1/2	3/16	2.98	
7/8	1 1/8	3/16	1.252		2	2 1/2	1/4	3.91	
7/8	1 1/4	1/8	.921		2	2 1/2	1/4	3.91	R. C. also
7/8	1 1/2	1/8	1.036		2	2 1/2	5/16	4.97	R. C. only
1	1 1/4	1/8	.979		2	3	3/16	3.32	
1	1 1/4	3/16	1.425		2	3	1/4	4.37	

CONTINUED ON BOTTOM OF OPPOSITE PAGE (72)



Special Angles and Channels are illustrated on page 70.

R. C. = Round Corners.

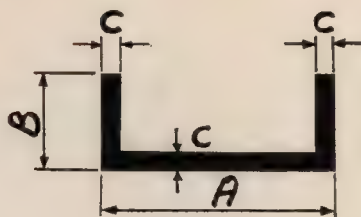


WEIGHTS LISTED ARE APPROXIMATE WEIGHTS PER LINEAL FOOT

A	B	C	Weight	MEMO	A	B	C	Weight	MEMO
$\frac{5}{16}$	$\frac{5}{16}$	$\frac{1}{8}$	.23		$1\frac{1}{2}$	$1\frac{1}{2}$	$\frac{1}{8}$	1.32	
$\frac{3}{8}$	$\frac{3}{8}$	$\frac{1}{8}$	.29		$1\frac{1}{2}$	$1\frac{1}{2}$	$\frac{3}{16}$	1.94	R. C. also
$\frac{1}{2}$	$\frac{1}{2}$	.100	.37		$1\frac{1}{2}$	$1\frac{1}{2}$	$\frac{1}{4}$	2.53	
$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{8}$	.40		$1\frac{1}{2}$	$1\frac{1}{2}$	$\frac{3}{8}$	3.63	
$\frac{5}{8}$	$\frac{5}{8}$	$\frac{1}{8}$	.52		$1\frac{3}{4}$	$1\frac{3}{4}$	$\frac{1}{8}$	1.55	
$\frac{3}{4}$	$\frac{3}{4}$	$\frac{1}{8}$	.63		$1\frac{3}{4}$	$1\frac{3}{4}$	$\frac{3}{16}$	2.29	
$\frac{3}{4}$	$\frac{3}{4}$	.102	.52		$1\frac{3}{4}$	$1\frac{3}{4}$	$\frac{1}{4}$	3.00	
$\frac{7}{8}$	$\frac{7}{8}$	.100	.60		$1\frac{7}{8}$	$1\frac{7}{8}$	$\frac{1}{8}$	1.67	
$\frac{7}{8}$	$\frac{7}{8}$	$\frac{1}{8}$	.75		2	2	.109	1.56	
1	1	.100	.79		2	2	$\frac{1}{8}$	1.78	
1	1	$\frac{1}{8}$	.84	R. C. also	2	2	$\frac{3}{16}$	2.60	R. C. also
1	1	$\frac{3}{16}$	1.25		2	2	$\frac{1}{4}$	3.40	R. C. also
1	1	$\frac{1}{4}$	1.61		2	2	$\frac{5}{16}$	4.24	
$1\frac{1}{8}$	$1\frac{1}{8}$	$\frac{1}{8}$	.98		$2\frac{1}{2}$	$2\frac{1}{2}$	.100	1.96	
$1\frac{1}{4}$	$1\frac{1}{4}$	$\frac{1}{8}$	1.09		$2\frac{1}{2}$	$2\frac{1}{2}$	$\frac{1}{8}$	2.24	
$1\frac{1}{4}$	$1\frac{1}{4}$	$\frac{3}{16}$	1.60		$2\frac{1}{2}$	$2\frac{1}{2}$	$\frac{3}{16}$	3.32	
$1\frac{1}{4}$	$1\frac{1}{4}$	$\frac{1}{4}$	2.07		$2\frac{1}{2}$	$2\frac{1}{2}$	$\frac{1}{4}$	4.37	
$1\frac{1}{2}$	$1\frac{1}{2}$	$\frac{3}{16}$	1.90	R. C. also	3	3	$\frac{1}{4}$	5.30	R. C. also
$1\frac{3}{8}$	$1\frac{3}{8}$	$\frac{1}{8}$	1.21		4	4	$\frac{1}{4}$	7.14	
$1\frac{3}{8}$	$1\frac{3}{8}$	$\frac{3}{16}$	1.77						

CONTINUED FROM PREVIOUS PAGE (71)

A	B	C	Weight	MEMO
2	3	$\frac{5}{16}$	5.40	
$2\frac{1}{2}$	3	$\frac{3}{16}$	3.67	
$2\frac{1}{2}$	$3\frac{1}{2}$	$\frac{1}{4}$	5.30	R. C. only
3	$3\frac{1}{2}$	$\frac{1}{2}$	11.05	
3	4	$\frac{3}{16}$	4.70	
3	4	$\frac{1}{4}$	6.22	

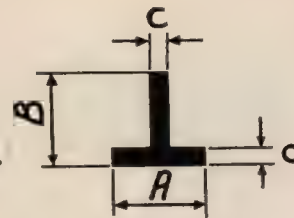


Special channels are illustrated on page 68.

WEIGHTS LISTED ARE APPROXIMATE WEIGHTS PER LINEAL FOOT

A	B	C	Weight	MEMO	A	B	C	Weight	MEMO
$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{32}$	.41		$1\frac{3}{4}$	$1\frac{1}{2}$	$\frac{1}{8}$	2.07	
$\frac{1}{2}$	$\frac{1}{4}$	$\frac{3}{32}$	.28		$1\frac{61}{64}$	$\frac{1}{2}$	$\frac{1}{100}$	.95	
$\frac{1}{2}$	$\frac{3}{8}$	$\frac{3}{32}$	.37		2	1	$\frac{3}{32}$	1.32	
$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{32}$	.54		2	1	$\frac{1}{8}$	1.73	
$\frac{1}{2}$	$\frac{3}{4}$	$\frac{3}{32}$	.63		2	$1\frac{1}{2}$	$\frac{3}{32}$	1.66	
$\frac{5}{8}$	$\frac{3}{8}$	$\frac{3}{32}$	.41		$2\frac{1}{4}$	$\frac{1}{2}$	$\frac{3}{32}$	1.06	
$\frac{5}{8}$	$\frac{1}{2}$	$\frac{1}{8}$	.63		$2\frac{1}{4}$	1	$\frac{3}{32}$	1.40	
$\frac{5}{8}$	$\frac{3}{4}$	$\frac{3}{32}$	.67		$2\frac{1}{4}$	$1\frac{1}{2}$	$\frac{3}{32}$	1.75	
$\frac{5}{8}$	1	$\frac{3}{32}$	.84		$2\frac{1}{2}$	1	$\frac{3}{32}$	1.49	
$\frac{3}{4}$	$\frac{3}{8}$	$\frac{1}{8}$	.58		$2\frac{1}{2}$	$1\frac{1}{2}$	$\frac{1}{8}$	2.42	
$\frac{3}{4}$	$\frac{1}{2}$	$\frac{3}{32}$	.53		$2\frac{3}{4}$	1	$\frac{3}{32}$	1.58	
$\frac{3}{4}$	1	$\frac{3}{32}$	.88		3	1	$\frac{3}{32}$	1.66	
$\frac{7}{8}$	$\frac{3}{8}$	$\frac{3}{32}$	.50		3	$1\frac{1}{4}$	$\frac{3}{32}$	1.83	
$\frac{7}{8}$	$\frac{1}{2}$	$\frac{3}{32}$	.58		3	$1\frac{1}{2}$	$\frac{3}{32}$	2.00	
$\frac{7}{8}$	$\frac{5}{8}$	$\frac{3}{32}$	.67		3	$1\frac{1}{2}$	$\frac{1}{4}$	5.07	
1	$\frac{3}{8}$	$\frac{3}{32}$	.54		3	2	$\frac{1}{4}$	6.00	
1	$\frac{1}{2}$	.083	.56		3	$2\frac{1}{4}$	$\frac{1}{4}$	6.45	
1	$\frac{1}{2}$	$\frac{1}{8}$	.81		$3\frac{1}{4}$	$\frac{3}{4}$	$\frac{1}{8}$	2.07	
1	$\frac{3}{4}$	$\frac{3}{32}$	.80		$3\frac{1}{4}$	1	$\frac{1}{8}$	2.30	
1	$\frac{3}{4}$	$\frac{1}{8}$	1.04		$3\frac{3}{4}$	1	$\frac{3}{32}$	1.92	
$1\frac{1}{8}$	$\frac{3}{8}$	$\frac{1}{8}$	.75		4	$1\frac{3}{4}$	$\frac{3}{32}$	2.53	
$1\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{8}$	.81		$4\frac{1}{2}$	$1\frac{1}{2}$	$\frac{3}{16}$	4.91	
$1\frac{1}{4}$	$\frac{1}{2}$	$\frac{1}{8}$	.92		5	$1\frac{3}{4}$	$\frac{1}{8}$	3.80	
$1\frac{1}{4}$	$\frac{5}{8}$	$\frac{3}{32}$	.80		$5\frac{1}{2}$	$1\frac{1}{2}$	$\frac{1}{8}$	3.80	
$1\frac{1}{4}$	$\frac{5}{8}$	.128	1.06		EQUAL BASE AND LEGS				
$1\frac{1}{4}$	$\frac{3}{4}$	.081	.76						
$1\frac{1}{2}$	$\frac{1}{2}$	$\frac{3}{32}$	.80		$\frac{3}{8}$	$\frac{3}{8}$	$\frac{3}{32}$	.32	
$1\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{8}$	1.04		$\frac{1}{2}$	$\frac{1}{2}$	$\frac{3}{32}$	.45	
$1\frac{1}{2}$	$\frac{3}{4}$	$\frac{3}{32}$	.97		$\frac{5}{8}$	$\frac{5}{8}$	$\frac{3}{32}$	.57	
$1\frac{1}{2}$	1	$\frac{3}{32}$	1.08		$\frac{3}{4}$	$\frac{3}{4}$	$\frac{1}{8}$	.92	
$1\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{8}$	1.08		$\frac{7}{8}$	$\frac{7}{8}$	$\frac{3}{32}$	.84	
$1\frac{3}{4}$	$\frac{3}{4}$	$\frac{3}{32}$	1.06		1	1	$\frac{3}{32}$	.97	
$1\frac{3}{4}$	1	$\frac{3}{32}$	1.23						

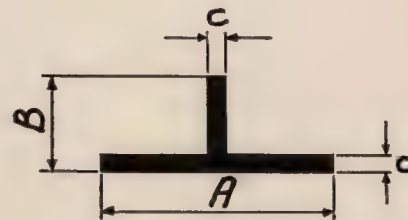
Special tees are illustrated on page 69.



EQUAL LEGS

WEIGHTS LISTED ARE APPROXIMATE WEIGHTS PER LINEAL FOOT

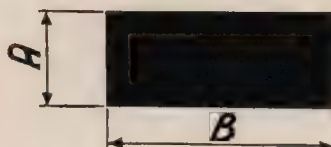
A	B	C	Weight	MEMO	A	B	C	Weight	MEMO
$\frac{3}{16}$	$\frac{3}{16}$	$\frac{1}{8}$	.461		$1\frac{1}{4}$	$1\frac{1}{4}$	$\frac{1}{4}$	2.07	
$\frac{5}{8}$	$\frac{5}{8}$	$\frac{1}{8}$	.520		$1\frac{1}{2}$	$1\frac{1}{2}$	$\frac{3}{16}$	1.94	
$\frac{3}{4}$	$\frac{3}{4}$	$\frac{1}{8}$	.630		$1\frac{1}{2}$	$1\frac{1}{2}$	$\frac{1}{4}$	2.53	
$\frac{7}{8}$	$\frac{7}{8}$	$\frac{1}{8}$	.750		2	2	$\frac{3}{16}$	2.63	
1	1	$\frac{1}{8}$	.860		2	2	$\frac{3}{8}$	5.00	
1	1	$\frac{3}{16}$	1.250		$2\frac{1}{2}$	$2\frac{1}{2}$	$\frac{3}{8}$	6.39	
$1\frac{1}{4}$	$1\frac{1}{4}$	$\frac{1}{8}$	1.090		3	3	$\frac{3}{8}$	7.77	



UNEQUAL LEGS

WEIGHTS LISTED ARE APPROXIMATE WEIGHTS PER LINEAL FOOT

A	B	C	Weight	MEMO	A	B	C	Weight	MEMO
$1\frac{1}{4}$	$2\frac{1}{2}$	$\frac{1}{8}$	1.67		$1\frac{3}{4}$	$1\frac{1}{4}$	$\frac{3}{16}$	1.94	
$1\frac{1}{4}$	$2\frac{1}{2}$	$\frac{1}{4}$	3.22		2	1	$\frac{1}{8}$	1.32	
$1\frac{1}{2}$	$\frac{3}{4}$	$\frac{3}{32}$	.75		2	$2\frac{1}{2}$	$\frac{1}{8}$	2.00	
$1\frac{1}{2}$	2	$\frac{1}{8}$	1.55						



There are tools for many sizes other than those listed.
Call or write if the size you want is not listed.

W = APPROXIMATE WEIGHT PER LINEAL FOOT

A	B	W	A	B	W	A	B	W	A	B	W	A	B	W
$\frac{3}{32}$	$\frac{1}{4}$	.09	$\frac{3}{16}$	$\frac{3}{8}$	.26	$\frac{5}{16}$	$\frac{5}{8}$	.72	$\frac{7}{16}$	$1\frac{1}{2}$	2.43	$\frac{5}{8}$	$2\frac{3}{8}$	5.46
$\frac{3}{32}$	$\frac{3}{8}$	.13	$\frac{3}{16}$	$\frac{1}{2}$	.35	$\frac{5}{16}$	$\frac{3}{4}$	.86	$\frac{7}{16}$	$1\frac{3}{4}$	2.82	$\frac{5}{8}$	$2\frac{1}{2}$	5.75
$\frac{3}{32}$	$\frac{1}{2}$	.17	$\frac{3}{16}$	$\frac{5}{8}$	.43	$\frac{5}{16}$	$\frac{7}{8}$	1.00	$\frac{7}{16}$	2	3.22	$\frac{5}{8}$	3	6.90
$\frac{3}{32}$	$\frac{5}{8}$	.22	$\frac{3}{16}$	$\frac{3}{4}$	.52	$\frac{5}{16}$	1	1.15	$\frac{7}{16}$	$2\frac{1}{2}$	4.03	$\frac{5}{8}$	$3\frac{1}{4}$	7.48
$\frac{3}{32}$	$\frac{3}{4}$	.26	$\frac{3}{16}$	$\frac{7}{8}$	.61	$\frac{5}{16}$	$1\frac{1}{8}$	1.29	$\frac{1}{2}$	$\frac{9}{16}$	1.04	$1\frac{1}{16}$	1	2.53
$\frac{3}{32}$	$\frac{7}{8}$	.30	$\frac{3}{16}$	1	.70	$\frac{5}{16}$	$1\frac{3}{16}$	1.36	$\frac{1}{2}$	$\frac{5}{8}$	1.15	$1\frac{1}{16}$	$1\frac{1}{8}$	2.85
$\frac{3}{32}$	1	.35	$\frac{3}{16}$	$1\frac{1}{16}$	.73	$\frac{5}{16}$	$1\frac{1}{4}$	1.43	$\frac{1}{2}$	$\frac{3}{4}$	1.38	$1\frac{1}{16}$	$1\frac{3}{4}$	4.43
$\frac{3}{32}$	$1\frac{1}{8}$	.39	$\frac{3}{16}$	$1\frac{1}{8}$	.78	$\frac{5}{16}$	$1\frac{3}{8}$	1.58	$\frac{1}{2}$	$\frac{7}{8}$	1.61	$\frac{3}{4}$	$\frac{7}{8}$	2.42
$\frac{3}{32}$	$1\frac{1}{4}$	.43	$\frac{3}{16}$	$1\frac{1}{4}$	.86	$\frac{5}{16}$	$1\frac{1}{2}$	1.73	$\frac{1}{2}$	1	1.84	$\frac{3}{4}$	1	2.76
$\frac{3}{32}$	$1\frac{3}{8}$	.48	$\frac{3}{16}$	$1\frac{3}{8}$	.95	$\frac{5}{16}$	2	2.30	$\frac{1}{2}$	$1\frac{1}{8}$	2.07	$\frac{3}{4}$	$1\frac{1}{8}$	3.11
$\frac{3}{32}$	$1\frac{1}{2}$	.52	$\frac{3}{16}$	$1\frac{1}{2}$	1.04	$\frac{5}{16}$	$2\frac{1}{4}$	2.59	$\frac{1}{2}$	$1\frac{1}{4}$	2.30	$\frac{3}{4}$	$1\frac{1}{4}$	3.45
$\frac{3}{32}$	$1\frac{3}{4}$	.60	$\frac{3}{16}$	$1\frac{3}{4}$	1.21	$\frac{5}{16}$	$3\frac{1}{2}$	4.03	$\frac{1}{2}$	$1\frac{3}{8}$	2.53	$\frac{3}{4}$	$1\frac{1}{2}$	4.15
$\frac{3}{32}$	2	.69	$\frac{3}{16}$	2	1.39	$\frac{3}{8}$	$\frac{1}{2}$	.69	$\frac{1}{2}$	$1\frac{1}{2}$	2.76	$\frac{3}{4}$	$1\frac{5}{8}$	4.49
$\frac{3}{32}$	$2\frac{1}{2}$	.86	$\frac{3}{16}$	$2\frac{1}{2}$	1.73	$\frac{3}{8}$	$\frac{9}{16}$	.78	$\frac{1}{2}$	$1\frac{5}{8}$	3.00	$\frac{3}{4}$	2	5.53
$\frac{1}{8}$	$\frac{1}{4}$	.12	$\frac{1}{4}$	$\frac{3}{8}$	.35	$\frac{3}{8}$	$\frac{5}{8}$	.86	$\frac{1}{2}$	$1\frac{3}{4}$	3.22	$\frac{3}{4}$	3	8.28
$\frac{1}{8}$	$\frac{3}{8}$	.17	$\frac{1}{4}$	$\frac{1}{2}$	.46	$\frac{3}{8}$	$\frac{3}{4}$	1.04	$\frac{1}{2}$	$1\frac{7}{8}$	3.45	$1\frac{3}{16}$	$1\frac{5}{16}$	3.86
$\frac{1}{8}$	$\frac{1}{2}$	.23	$\frac{1}{4}$	$\frac{5}{8}$	.58	$\frac{3}{8}$	$\frac{7}{8}$	1.21	$\frac{1}{2}$	2	3.68	$1\frac{3}{16}$	$1\frac{3}{8}$	4.02
$\frac{1}{8}$	$\frac{5}{8}$	.29	$\frac{1}{4}$	$\frac{3}{4}$	.69	$\frac{3}{8}$	1	1.38	$\frac{1}{2}$	$2\frac{1}{2}$	4.60	$\frac{7}{8}$	1	3.22
$\frac{1}{8}$	$\frac{3}{4}$	.35	$\frac{1}{4}$	$\frac{7}{8}$	.81	$\frac{3}{8}$	$1\frac{1}{8}$	1.55	$\frac{1}{2}$	$2\frac{7}{8}$	5.29	$\frac{7}{8}$	$1\frac{1}{4}$	4.03
$\frac{1}{8}$	$\frac{7}{8}$	.40	$\frac{1}{4}$	1	.92	$\frac{3}{8}$	$1\frac{1}{4}$	1.73	$\frac{1}{2}$	3	5.52	$\frac{7}{8}$	2	6.44
$\frac{1}{8}$	1	.46	$\frac{1}{4}$	$1\frac{1}{8}$	1.04	$\frac{3}{8}$	$1\frac{1}{2}$	2.08	$\frac{1}{2}$	$3\frac{1}{2}$	6.44	$\frac{7}{8}$	$2\frac{5}{16}$	7.45
$\frac{1}{8}$	$1\frac{1}{8}$	.52	$\frac{1}{4}$	$1\frac{1}{16}$	1.09	$\frac{3}{8}$	$1\frac{5}{8}$	2.25	$\frac{1}{2}$	4	7.36	$\frac{7}{8}$	$3\frac{1}{2}$	11.27
$\frac{1}{8}$	$1\frac{1}{4}$	.58	$\frac{1}{4}$	$1\frac{1}{4}$	1.15	$\frac{3}{8}$	$1\frac{3}{4}$	2.42	$\frac{9}{16}$	$1\frac{3}{16}$	1.68	$1\frac{5}{16}$	$1\frac{1}{2}$	5.20
$\frac{1}{8}$	$1\frac{3}{8}$	.63	$\frac{1}{4}$	$1\frac{3}{8}$	1.27	$\frac{3}{8}$	2	2.76	$\frac{9}{16}$	$1\frac{1}{4}$	2.59	1	$1\frac{1}{4}$	4.60
$\frac{1}{8}$	$1\frac{1}{2}$	.69	$\frac{1}{4}$	$1\frac{1}{2}$	1.38	$\frac{3}{8}$	$2\frac{1}{4}$	3.11	$\frac{9}{16}$	$1\frac{3}{8}$	2.85	1	$1\frac{3}{8}$	5.06
$\frac{1}{8}$	$1\frac{5}{8}$	.75	$\frac{1}{4}$	$1\frac{5}{8}$	1.50	$\frac{3}{8}$	3	4.14	$\frac{5}{8}$	$\frac{3}{4}$	1.73	1	$1\frac{1}{2}$	5.53
$\frac{1}{8}$	$1\frac{3}{4}$	.81	$\frac{1}{4}$	$1\frac{3}{4}$	1.61	$\frac{7}{16}$	$\frac{1}{2}$	.81	$\frac{5}{8}$	$\frac{7}{8}$	2.01	1	$1\frac{3}{4}$	6.44
$\frac{1}{8}$	2	.92	$\frac{1}{4}$	2	1.84	$\frac{7}{16}$	$\frac{9}{16}$	.91	$\frac{5}{8}$	1	2.30	1	2	7.36
$\frac{1}{8}$	$2\frac{1}{8}$	1.00	$\frac{1}{4}$	$2\frac{1}{4}$	2.07	$\frac{7}{16}$	$\frac{5}{8}$	1.01	$\frac{5}{8}$	$1\frac{1}{8}$	2.59	$1\frac{1}{8}$	$1\frac{3}{4}$	7.25
$\frac{1}{8}$	$2\frac{1}{4}$	1.04	$\frac{1}{4}$	$2\frac{1}{2}$	2.30	$\frac{7}{16}$	$\frac{3}{4}$	1.21	$\frac{5}{8}$	$1\frac{1}{2}$	3.46	$1\frac{1}{8}$	2	8.28
$\frac{1}{8}$	$2\frac{1}{2}$	1.15	$\frac{1}{4}$	3	2.76	$\frac{7}{16}$	$\frac{7}{8}$	1.41	$\frac{5}{8}$	$1\frac{5}{8}$	3.74	$1\frac{1}{4}$	$1\frac{1}{2}$	6.95
$\frac{1}{8}$	$2\frac{3}{4}$	1.27	$\frac{1}{4}$	$3\frac{1}{2}$	3.22	$\frac{7}{16}$	1	1.62	$\frac{5}{8}$	$1\frac{3}{4}$	4.03	$1\frac{1}{4}$	2	9.20
$\frac{1}{8}$	3	1.38	$\frac{5}{16}$	$\frac{3}{8}$	.43	$\frac{7}{16}$	$1\frac{1}{8}$	1.81	$\frac{5}{8}$	2	4.60	$1\frac{1}{2}$	3	16.59
$\frac{3}{16}$	$\frac{1}{4}$	.17	$\frac{5}{16}$	$\frac{1}{2}$	.58	$\frac{7}{16}$	$1\frac{1}{4}$	2.01	$\frac{5}{8}$	$2\frac{1}{8}$	4.90			



TOLERANCES & COMPUTATION OF WEIGHTS

To compute the approximate weight per lineal foot of Extruded Architectural Bronze Shapes the following example is quite simple:

Take the shape No. 2050 at the right, the girth or perimeter of this shape is $4\frac{1}{2}$ "—multiply the girth by the thickness or gauge, by 12", by the weight of one cubic inch of extruded bronze (.30 lbs.). Thus we have $4\frac{1}{2}" \times \frac{1}{8}" \times 12" \times .32$, or $\frac{9}{2} \times \frac{1}{8} \times \frac{12}{1} \times \frac{.32}{1} = 2.16$ lbs.

The actual weight of this shape is 2.06 lbs.

NOTE: While one cubic inch of Extruded Bronze weighs .30 lbs. we use .32 lbs. to simplify the equation as most shapes will run $\frac{3}{16}"$, $\frac{1}{8}"$, $\frac{3}{32}"$, etc., thick.

COMMERCIAL EXTRUDED SHAPE GAUGE TOLERANCES

All Plus and Minus

Extruded Only

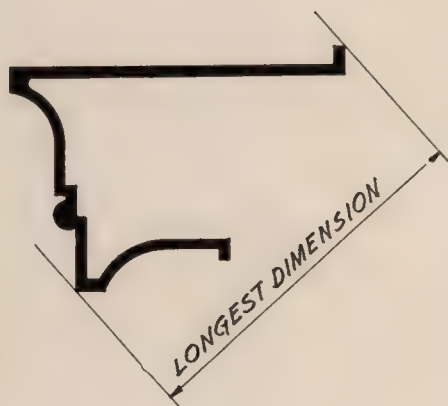
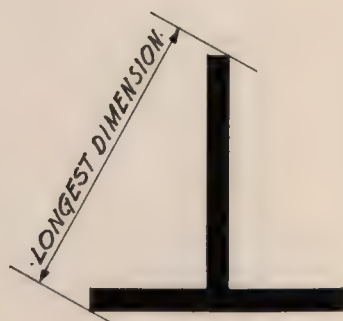
Solid Shapes—Such as

Rounds, Squares, Ovals, etc.

Up to $\frac{1}{2}"$.....	.008
Over $\frac{1}{2}"$ to 1".....	.010
Over 1" to $2\frac{1}{2}"$.....	.012
Over $2\frac{1}{2}"$ Multiply long dimension by.....	.006

Where other dimensions are less than $2\frac{1}{2}"$ use tolerances as shown above.

Architectural Shapes are usually furnished to plus or minus .010 tolerances. This of course refers to gauge only. On over-all dimensions refer to above table.



PART TOOL OR DIE CHARGES:

Part tool or die charges are computed on the longest dimension, diagonal or otherwise, of each particular shape as shown in the sketches at the left.

Including 2¼" and narrower.....	\$20.00
Over 2¼" and including 5"	35.00
Over 5" and including 6"	50.00
Over 6" and including 6½"	60.00
*Over 6½" and including 7"	70.00
Over 7" and including 7½"	80.00

* **NOTE:** Shapes over 6½" consult Mill before ordering.

The above charges cover part cost of the necessary tools and fixtures required for the particular work. Such tools and fixtures remain the sole property of the seller and are retained in seller's possession for use exclusively in filling orders of the buyer.

There will be no additional charge for their up-keep or replacement, but if, at any time a period of two years has elapsed since the receipt of any order from the buyer requiring the use of such tools and fixtures, seller may thereafter make any use or disposition of such tools and fixtures as seller desires, without any accounting to the buyer for such use or disposition, or the proceeds thereof.

Part tool or die charges are subject to change without notice.

REBATES:

Rebates of fitting up charges to be allowed at basis of 1c per pound. When initial order specifies sufficient quantity of a shape to earn rebate, the tool charge will be waived.



INDEX FOR CHASE EXTRUDED SHAPES CATALOG

INDEX 78

A.I.A. File No. Q-1.1

Revised April 20, 1936

NUMERICAL INDEX

WITH WEIGHT PER LINEAL FOOT

3-261

Shape Number	Page Number	Approx. Wgt. Per Lin. Ft.	Shape Number	Page Number	Approx. Wgt. Per Lin. Ft.
3	60	1.47	168	60	1.73
4	59	2.25	171	60	.75
5	59	2.82	172	59	1.73
6	59	.83	177	60	.69
8	7	1.86	182	69	1.02
16	7	.59	183	5	.90
17	7	1.47	185	68	1.50
22	60	.65	192	60	.70
23	59	1.18	196	64	.58
24	59	.40	201	7	1.35
35	69	.45	202	6	5.50
36	69	.58	204	67	.25
38	59	1.15	208	6	4.76
39	60	.73	209	64	.70
40	59	.56	210	8	1.79
45	6	1.63	214	67	.20
48	60	.73	215	62	2.82*
49	59	.49	215A	62	2.47*
50	32	1.52	216	62	3.58*
51	7	1.54	216A	62	3.03*
60	60	1.20	217	63	3.88*
61	60	1.15	217A	63	3.58*
62	60	.88	218	61	2.15*
63	60	.76	218A	61	1.88*
64	60	1.46	219	61	2.88*
65	59	4.49	219A	61	2.26*
66	59	5.38	220	61	4.12*
72	70	.80	220A	61	3.67*
74	69	.95	221	65	2.25
77	7	1.06	222	59	.42
90	7	1.97	225	64	.62
104	43	.65	227	6	4.97
105	28	.45	230	6	4.61
116	7	.84	231	60	.70
119	59	3.97	232	64	.82
125	60	1.05	233	57	.62
127	59	.75	234	64	.72
131	69	1.15	235	64	.71
133	59	1.40	238	63	1.20
136	60	1.41	239	64	.61
137	59	1.39	240	64	.56
138	8	2.41	242	64	.87
141	51	1.37	246	60	.22
146	68	2.23	249	5	.54
147	7	1.21	250	28	.84
148	44	.95	251	28	.66
159	60	1.25	252	67	.71
161	6	1.34	253	4	3.50
163	4	4.40	260	8	.98
164	60	.81	261	8	.70

*Star Indicates Change



NUMERICAL INDEX

WITH WEIGHT PER LINEAL FOOT

267—555

Shape Number	Page Number	Approx. Wgt. Per Lin. Ft.	Shape Number	Page Number	Approx. Wgt. Per Lin. Ft.
267	64	.60	411	59	.56
270	28	.52	412	60	.61
271	28	.72	415	28	.86
272	68	2.28	416	28	.67
273	60	.75	417	70	1.36
274	68	1.45	418	64	.66
275	66	2.10	420	43	3.04
278	68	.44	435	68	.95
285	64	.64	440	63	2.38
286	64	.54	446	66	3.00
287	64	.44	452	65	1.92
288	65	1.77	453	58	.94
297	48	3.66	454	58	.73
298	36	2.78	458	64	.75
299	64	.72	459	60	1.00
300	65	2.45*	471	27	1.10
306	58	.65	472	27	1.17
315	64	.57	473	27	1.02
316	64	.66*	474	63	4.07
317	57	1.06	475	27	1.06
318	29	.88	476	28	.92
319	58	1.02	477	28	.75
322	70	8.00	478	69	1.98
324	65	2.70	479	68	4.03
329	64	.84	482	69	3.75
330	68	6.39	484	64	.85
331	64	.51	485	63	.88
332	32	.68	486	64	.56
333	60	.48	487	64	.82
334	64	.46	488	63	.40
338	67	.80	489	60	.44
339	67	.64	490	60	.74
343	64	.42	492	33	.44
344	62	2.75	493	66	2.44
345	62	3.46	496	52	.22
346	68	2.67	500	70	1.50
362	6	.95	506	60	.45
364	69	.73	507	62	2.30*
372	68	.70	515	63	4.20
376	69	1.61	530	4	2.20
379	31	.18	534	57	.86
390	66	2.88	536	34	.73
391	64	1.05	537	35	.81
394	64	.42	539	66	2.19
395	64	.80	545	69	.35
396	67	.78	546	27	1.21
399	58	1.06	552	61	1.00
408	52	1.44	553	67	.50
409	64	.84	554	67	.29
410	66	2.16	555	67	.23

* Star Indicates Change



NUMERICAL INDEX

WITH WEIGHT PER LINEAL FOOT

2115—2556

Shape Number	Page Number	Approx. Wgt. Per Lin. Ft.	Shape Number	Page Number	Approx. Wgt. Per Lin. Ft.
2115	47	4.25	2507	21	2.00
2116	38	.88	2508	21	1.20
2117	50	4.75	2509	22	2.25
2118	25	1.41	2510	34	2.70
2119	51	3.40	2511	12	2.16
2120	25	1.47	2512	24	1.52*
2121	42	2.64	2513	24	1.44
2122	42	3.09	2514	31	.42
2124	2	2.38	2515	12	2.02
2125	10	2.21	2516	9	1.56
2126	5	2.56	2517	36	2.64
2127	5	2.00	2518	35	4.56
2128	5	5.50	2519	44	.84
2129	37	.68	2520	31	.96
2137A	15	2.27*	2521	34	3.84
2137B	15	2.50	2522	23	4.32
2141	2	2.50	2523	7	1.75*
2146	49	1.75	2524	23	2.88
2147	50	2.87	2525	30	1.08
2151	32	.59	2526	30	1.08
2152	31	.56	2527	30	1.18
2154	20	2.31	2528	30	1.12
2166	5	2.81	2529	19	2.12*
2167	5	3.75	2530	19	2.25
2168	14	3.43	2531	32	.68*
2169	33	2.50	2532	31	.72
2170	13	3.60	2533	31	.63
2171	38	1.56	2534	32	.74
2172	38	1.18	2535	31	.63
2173	60	.68	2536	31	.45
2174	37	.81	2537	31	.56
2175	19	.87	2538	31	.36
2176	51	4.37	2539	32	.38
2199	37	1.75	2540	32	.40
2200	11	3.36	2541	32	.36
2220	38	1.16	2542	31	.47*
2221	5	5.48	2543	33	1.35
2222	38	1.93	2544	33	1.62
2223	5	3.18	2545	33	1.44
2227	15	4.60	2546	1	2.6*
2227A	15	3.52	2547	1	2.25*
2228	35	3.30	2548	1	1.80
2229	33	3.04	2549	7	2.16
2500	12	2.00*	2550	7	1.89
2501	34	2.55	2551	7	.84
2502	34	1.21	2552	57	.63
2503	22	2.28	2553	57	.50
2504	22	1.08	2554	6	2.3*
2505	21	2.52	2555	6	1.82
2506	22	1.30	2556	53	3.5*

*Star Indicates Change



NUMERICAL INDEX

WITH WEIGHT PER LINEAL FOOT

2557—C10327

Shape Number	Page Number	Approx. Wgt. Per Lin. Ft.	Shape Number	Page Number	Approx. Wgt. Per Lin. Ft.
2557	54	3.85*	C10171-2	31	.45
2558	20	1.41*	C10171-3	31	1.67
2559	20	1.65	C10172	30	2.05
2560	19	1.50*	C10173	56	3.83
2561	20	1.70	C10174-1	32	.68
2562	19	1.53*	C10174-2	18	2.77
2563	20	1.65	C10174-3	18	2.88
2564	25	1.44	C10175-1	32	.50
2565	24	1.71	C10175-2	16	2.23
2566	25	1.50	C10175-3	16	3.81
2567	24	1.68	C10177-1	50	4.20
2568	54	1.96*	C10177-2	50	4.39
2569	36	2.52	C10178	13	3.17
2570	70	.23	C10183	44	.57
2571	70	.32	C10201	55	4.85
2572	70	2.08	C10202	43	.63
2573	70	3.36	C10203	14	3.51
2574	27	.63	C10205	55	3.24
2575	27	.69	C10207	69	.25
2576	27	.75	C10248	63	3.90
2577	70	.23	C10253	32	.80
2578	70	.19	C10254	29	1.47
2579	70	.27	C10256	56	1.31
2580	32	.487	C10257	60	.54
2581	67	.95*	C10258	23	2.48
C10026	8	.33	C10260	26	4.23
C10029	68	.76	C10262	29	1.03
C10096	53	1.49	C10263	31	.60
C10097	40	2.51	C10264	34	1.86
C10098	39	1.62	C10265	28	.51
C10108	40	3.15	C10266	28	.36
C10109	40	1.78	C10267	36	2.90
C10110	43	1.44	C10268	26	4.45
C10113	54	.75	C10288	44	.69
C10129	45	1.49	C10289	44	1.14
C10134	16	2.48	C10307	55	2.77
C10137	56	2.86	C10308	55	2.90
C10141	53	1.19	C10318	28	.45
C10142	70	.84	C10319	28	.56
C10164	1	1.93	C10320	9	4.82
C10167	8	.82	C10321	26	3.01
C10168	32	2.10	C10323	60	1.20
C10169	54	1.82	C10324	19	.94
C10170	25	1.95	C10325	28	.47
C10171-1	31	.21	C10325A	28	.36
			C10327	35	4.17

* Star Indicates Change

CHASE BRASS & COPPER CO.

Incorporated

Subsidiary of Kennecott Copper Corporation

Waterbury

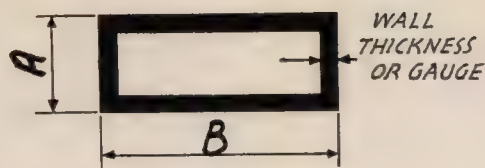
Connecticut

DRAWN MATERIAL

should not be confused with extruded metal. It is produced in lighter gauges and wall thicknesses than extruded metal and is used principally for decorative purposes where the strength and sturdiness of extruded metal are not required.

A complete list of standard sizes of drawn seamless tubing (square and rectangular), angles and channels are listed on the following five pages. These lists should be helpful to designers, draftsmen and others interested in architectural bronze work.

Drawn Material can be furnished in a regular high brass alloy (bright yellow color) as well as in commercial bronze, low brass and rich low brass. Acid dipped rich low brass should be specified for drawn material to be used in conjunction with extruded Bronze. Muntz Metal or Trim Bronze should be specified when sheet metal is required. These materials will closely match the color of Chase Architectural Bronze.

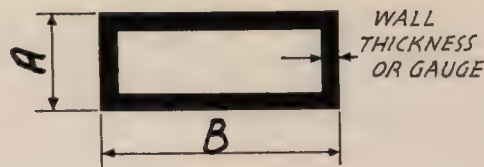


ALL WEIGHTS LISTED ARE APPROXIMATE

A	B	Wall Thickness	Wght. Per Lineal Ft.	MEMO	A	B	Wall Thickness	Wght. Per Lineal Ft.	MEMO
1/4	3/8	.032	.13		1/2	3/4	.051	.43	
1/4	3/8	.040	.15		1/2	3/4	.064	.53	
1/4	7/16	.036	.16		1/2	3/4	.081	.64	
1/4	1/2	.032	.16		1/2	1	.032	.34	
1/4	1/2	.040	.20		1/2	1	.051	.53	
1/4	1/2	.051	.24		1/2	1	.062	.65	
1/4	3/4	.040	.28		1/2	1	.064	.72	
5/16	3/8	.031	.14		1/2	1	.081	.80	
5/16	1/2	.040	.22		1/2	1 1/8	.064	.70	
5/16	1/2	.051	.26		1/2	1 1/4	.064	.76	
5/16	5/8	.040	.26		1/2	1 1/2	.051	.71	
5/16	3/4	.040	.29		1/2	1 1/2	.064	.88	
5/16	1 1/16	.040	.35		1/2	1 1/2	.081	1.10	
3/8	1/2	.032	.19		1/2	1 1/2	.090	1.21	
3/8	1/2	.040	.22		1/2	1 1/2	.125	1.65	
3/8	1/2	.051	.29		1/2	1 3/4	.051	.80	
3/8	1/2	.064	.35		1/2	1 3/4	.064	1.00	
3/8	3/4	.032	.25		1/2	2	.040	.72	
3/8	3/4	.040	.31		1/2	2	.064	1.12	
3/8	3/4	.051	.38		5/8	1 1/16	.093	.75	
3/8	3/4	.064	.47		5/8	3/4	.064	.59	
3/8	1	.040	.39		5/8	1	.064	.70	
3/8	1	.051	.46		5/8	1	.081	.88	
3/8	1	.064	.59		5/8	1 1/4	.040	.53	
3/8	1	.081	.72		5/8	1 1/4	.051	.69	
3/8	1 1/4	.051	.57		5/8	1 1/4	.064	.82	
3/8	1 1/4	.064	.71		5/8	1 1/4	.081	1.00	
7/16	5/8	.035	.25		5/8	1 1/2	.032	.48	
1/2	5/8	.040	.35		5/8	1 1/2	.064	.94	
1/2	5/8	.051	.38		5/8	2	.064	1.18	
1/2	5/8	.064	.47		3/4	7/8	.062	.71	
1/2	5/8	.093	.63		3/4	1	.040	.50	
1/2	3/4	.040	.35		3/4	1	.064	.75	

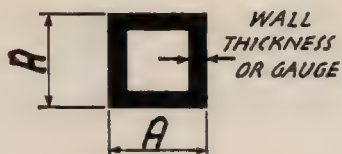


Corners are square as noted.
R. C. Indicates Round corners.



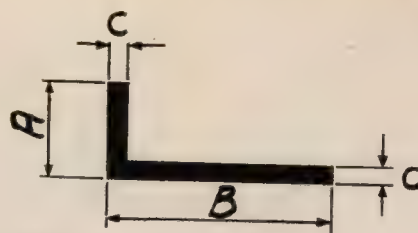
ALL WEIGHTS LISTED ARE APPROXIMATE

A	B	Wall Thickness	Wght. Per Lineal Ft.	MEMO	A	B	Wall Thickness	Wght. Per Lineal Ft.	MEMO
3/4	1 1/4	.078	1.20		1 1/4	3	.081	2.43	
3/4	1 1/2	.064	1.00		1 1/4	3 1/2	.064	2.18	
3/4	1 3/4	.081	1.38		1 1/4	3 1/2	.081	2.73	
3/4	2	.040	.79		1 1/2	2	.064	1.60	
3/4	2	.064	1.22		1 1/2	2	.081	1.96	
7/8	1 1/2	.080	1.32		1 1/2	2	.102	2.48	
7/8	1 3/4	.051	.95		1 1/2	2	.125	3.06	
7/8	2 3/4	.064	1.70	R. C. only	1 1/2	2 1/2	.064	1.83	
1 5/16	1 1/16	.032	.48		1 1/2	2 1/2	.081	2.28	
1	1 1/4	.064	1.00		1 1/2	3	.064	2.07	
1	1 1/4	.081	1.25		1 1/2	3	.081	2.58	
1	1 1/4	.125	1.84		1 1/2	3 1/2	.064	2.30	
1	1 1/2	.051	.90		1 1/2	3 1/2	.081	2.88	
1	1 1/2	.064	1.12		1 1/2	4	.081	3.17	
1	1 1/2	.081	1.38		1 1/2	4 1/2	.081	3.47	
1	2	.064	1.36		1 5/16	3	.156	4.78	
1	2	.081	1.69		1 5/8	3	.080	2.67	
1	2	.125	2.60		1 3/4	2	.080	2.14	
1	2 1/2	.064	1.60		1 3/4	2 1/4	.080	2.58	
1	3	.064	1.83		1 3/4	3	.080	2.73	
1	3	.081	2.30		1 3/4	3 1/2	.064	2.40	
1 1/8	2	.125	2.70		1 3/4	3 1/2	.081	3.03	
1 1/8	6	.125	6.48		1 3/4	4	.081	3.32	
1 1/4	1 1/2	.064	1.24		1 3/4	5	.081	3.92	
1 1/4	1 1/2	.081	1.53		1 3/4	5	.102	4.91	
1 1/4	2	.064	1.47		1 3/4	5 1/2	.081	4.22	
1 1/4	2	.081	1.84		2	2 1/2	.065	2.06	
1 1/4	2 1/8	.064	1.54		2	2 1/2	.081	2.59	
1 1/4	2 1/2	.064	1.71		2	4	.065	2.77	
1 1/4	2 1/2	.081	2.15		2	4	.081	3.47	
1 1/4	2 1/2	.125	3.25		2	5	.081	4.07	
1 1/4	3	.064	1.94		3 1/16	3 3/16	.062	2.82	



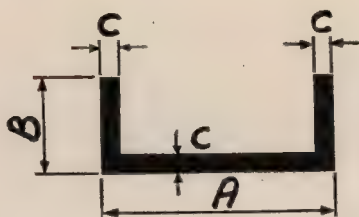
ALL WEIGHTS LISTED ARE APPROXIMATE. ALL SQUARE CORNERS

A	Wall Thickness	Weight Per Lineal Ft.	MEMO	A	Wall Thickness	Weight Per Lineal Ft.	MEMO
1/4	.025	.10		1	.025	.36	
1/4	.040	.13		1	.032	.45	
1/4	.050	.15		1	.040	.57	
3/8	.025	.13		1	.051	.71	
3/8	.032	.16		1	.064	.88	
3/8	.040	.20		1	.081	1.09	
3/8	.051	.24		1 1/8	.040	.64	
3/8	.064	.29		1 1/8	.049	.78	
7/16	.035	.21		1 1/8	.064	1.00	
7/16	.040	.24		1 1/4	.040	.72	
7/16	.051	.29		1 1/4	.064	1.12	
1/2	.025	.18		1 1/4	.081	1.38	
1/2	.032	.22		1 3/8	.040	.79	
1/2	.040	.28		1 3/8	.081	1.53	
1/2	.051	.33		1 1/2	.040	.87	
1/2	.064	.41		1 1/2	.051	1.08	
1/2	.081	.49		1 1/2	.064	1.35	
5/8	.025	.22		1 1/2	.081	1.69	
5/8	.032	.27		1 1/2	.125	2.58	
5/8	.040	.35		1 5/8	.032	.74	
5/8	.051	.43		1 3/4	.040	1.02	
5/8	.064	.53		1 3/4	.051	1.27	
5/8	.081	.64		1 3/4	.064	1.60	
3/4	.020	.21		1 3/4	.081	1.99	
3/4	.025	.27		2	.040	1.16	
3/4	.031	.33		2	.051	1.45	
3/4	.051	.52		2	.064	1.83	
3/4	.064	.65		2	.081	2.28	
3/4	.081	.79		2 1/2	.064	2.30	
3/4	.093	.89		2 1/2	.081	2.88	
7/8	.035	.44		2 1/2	.125	4.42	
7/8	.040	.50		3	.064	2.78	
7/8	.051	.61		3	.081	3.47	
7/8	.064	.76		3	.128	5.44	
1	.020	.29					



ALL WEIGHTS LISTED ARE THE APPROXIMATE WEIGHTS PER LINEAL FOOT

A	B	C	Weight	MEMO	A	B	C	Weight	MEMO
$\frac{1}{8}$	$\frac{3}{4}$	.040	.125		1	2	.187	1.940	
$\frac{5}{32}$	$\frac{3}{8}$	.064	.120		1	$2\frac{3}{4}$	.062	.850	
$\frac{5}{32}$	$\frac{5}{8}$	.045	.130		$1\frac{1}{4}$	$1\frac{1}{2}$	.093	.810	
$\frac{3}{16}$	$\frac{5}{16}$	.025	.050		EQUAL LEGS				
$\frac{3}{16}$	$\frac{3}{8}$	.081	.150						
$\frac{1}{4}$	$\frac{5}{16}$	.062	.114						
$\frac{1}{4}$	$\frac{9}{16}$	.036	.101						
$\frac{1}{4}$	$\frac{5}{8}$	.062	.185						
$\frac{1}{4}$	$\frac{3}{4}$	.045	.158		$\frac{3}{8}$	$\frac{3}{8}$	.062	.157	
$\frac{5}{16}$	$\frac{1}{2}$	.025	.070		$\frac{3}{8}$	$\frac{3}{8}$	.081	.200	
$\frac{5}{16}$	$\frac{5}{8}$	.040	.130		$\frac{1}{2}$	$\frac{1}{2}$	.062	.215	
$\frac{5}{16}$	1	.040	.190		$\frac{1}{2}$	$\frac{1}{2}$	.081	.275	
$\frac{5}{16}$	$1\frac{1}{4}$	.064	.350		$\frac{3}{4}$	$\frac{3}{4}$	.062	.329	
$\frac{3}{8}$	$\frac{1}{2}$	.035	.108		$\frac{3}{4}$	$\frac{3}{4}$	.081	.424	
$\frac{3}{8}$	$\frac{5}{8}$	.057	.197		$\frac{3}{4}$	$\frac{3}{4}$	.102	.526	
$\frac{3}{8}$	$\frac{3}{4}$	.064	.250		$\frac{3}{4}$	$\frac{3}{4}$	.125	.634	
$\frac{3}{8}$	$1\frac{1}{16}$	.040	.170		1	1	.062	.443	
$\frac{3}{8}$	1	.080	.410		1	1	.081	.574	
$\frac{7}{16}$	$1\frac{5}{32}$	.062	.210		1	1	.102	.714	
$\frac{1}{2}$	$\frac{5}{8}$	.045	.190		1	1	.125	.865	
$\frac{1}{2}$	$\frac{5}{8}$	.093	.370		$1\frac{1}{8}$	$1\frac{1}{8}$	.062	.501	
$\frac{1}{2}$	$\frac{5}{8}$	.125	.500		$1\frac{1}{8}$	$1\frac{1}{8}$	.125	.980	
$\frac{1}{2}$	1	.040	.220		$1\frac{1}{4}$	$1\frac{1}{4}$	.062	.558	
$\frac{1}{2}$	1	.051	.310		$1\frac{1}{4}$	$1\frac{1}{4}$	.081	.723	
$\frac{1}{2}$	1	.125	.630		$1\frac{1}{4}$	$1\frac{1}{4}$	.125	1.10	
$\frac{1}{2}$	$1\frac{1}{4}$	.051	.330		$1\frac{3}{8}$	$1\frac{3}{8}$	.062	.615	
$\frac{9}{16}$	1	.064	.370		$1\frac{3}{8}$	$1\frac{3}{8}$	.081	.798	
$\frac{5}{8}$	$1\frac{1}{2}$	.025	.180		$1\frac{3}{8}$	$1\frac{3}{8}$	.125	1.21	
$\frac{3}{4}$	1	.064	.400		$1\frac{1}{2}$	$1\frac{1}{2}$	.062	.672	
$\frac{3}{4}$	$1\frac{1}{4}$	.062	.470		$1\frac{1}{2}$	$1\frac{1}{2}$	.081	.843	
$\frac{3}{4}$	$1\frac{1}{2}$	.064	.530		$1\frac{1}{2}$	$1\frac{1}{2}$	.125	1.33	
$1\frac{1}{16}$	$1\frac{13}{16}$	.062	.580		$1\frac{1}{2}$	$1\frac{1}{2}$	.187	1.94	
1	$1\frac{1}{8}$	.125	.921		2	2	.062	.901	
1	$1\frac{1}{4}$	.050	.420		2	2	.081	1.17	
1	2	.125	1.320		2	2	.125	1.79	
					2	2	.187	2.63	



WEIGHTS LISTED ARE APPROXIMATE WEIGHTS PER LINEAL FOOT

A	B	C	Weight	MEMO	A	B	C	Weight	MEMO
$\frac{1}{4}$	$\frac{1}{4}$	.040	.098		$\frac{3}{4}$	$\frac{3}{8}$	.125	.570	
$\frac{1}{4}$	$\frac{1}{4}$	.062	.158		$\frac{3}{4}$	$\frac{1}{2}$	.062	.378	
$\frac{5}{16}$	$\frac{1}{2}$	.025	.120		$\frac{3}{4}$	$\frac{5}{8}$	.050	.370	
$\frac{3}{8}$	$\frac{1}{8}$	.040	.080		$\frac{3}{4}$	$\frac{5}{8}$	.093	.670	
$\frac{3}{8}$	$\frac{3}{8}$	.040	.154		$\frac{7}{8}$	$\frac{3}{8}$	.040	.220	
$\frac{13}{32}$	$\frac{3}{8}$	.035	.150		$\frac{7}{8}$	$\frac{3}{8}$	.080	.439	
$\frac{7}{16}$	$\frac{3}{16}$	.025	.080		$\frac{7}{8}$	$\frac{7}{16}$	.080	.520	
$\frac{1}{2}$	$\frac{1}{4}$	.030	.108		1	$\frac{1}{4}$	.045	.250	
$\frac{1}{2}$	$\frac{1}{4}$	.040	.135		1	$\frac{3}{8}$	.125	.690	
$\frac{1}{2}$	$\frac{1}{4}$	.050	.190		1	$\frac{1}{2}$	.040	.282	
$\frac{1}{2}$	$\frac{1}{4}$	.125	.470		1	$\frac{1}{2}$	.065	.438	
$\frac{1}{2}$	$\frac{5}{16}$	.035	.143		1	$\frac{1}{2}$	.080	.540	
$\frac{1}{2}$	$\frac{3}{8}$	.040	.172		1	$\frac{1}{2}$	.125	.840	
$\frac{1}{2}$	$\frac{3}{8}$	.062	.257		1	$\frac{3}{4}$	.080	.690	
$\frac{1}{2}$	$\frac{3}{8}$	.080	.327		1	$\frac{3}{4}$	.125	1.040	
$\frac{1}{2}$	$\frac{3}{4}$	.049	.290		1	$\frac{7}{8}$	.125	1.150	
$\frac{5}{8}$	$\frac{5}{16}$	.045	.191		$1\frac{1}{8}$	$\frac{9}{32}$	.093	.590	
$\frac{5}{8}$	$\frac{5}{16}$	.125	.460		$1\frac{1}{4}$	$\frac{1}{2}$	.080	.670	
$\frac{5}{8}$	$\frac{3}{8}$	.064	.200		$1\frac{1}{4}$	$\frac{3}{4}$	.080	.820	
$\frac{5}{8}$	$\frac{3}{8}$	.080	.360		$1\frac{1}{2}$	$\frac{1}{2}$	.080	.690	
$\frac{11}{16}$	$1\frac{1}{4}$	.093	1.050		$1\frac{1}{2}$	$\frac{3}{4}$	.062	.710	
$\frac{3}{4}$	$\frac{3}{8}$	.040	.208		$1\frac{1}{2}$	$\frac{3}{4}$	.125	1.260	
$\frac{3}{4}$	$\frac{3}{8}$	.064	.311		$1\frac{1}{2}$	1	.080	.980	
$\frac{3}{4}$	$\frac{3}{8}$	.093	.453		$1\frac{3}{4}$	$\frac{3}{4}$	.062	.770	
$\frac{3}{4}$	$\frac{3}{8}$	.102	.480		$1\frac{3}{4}$	$\frac{3}{4}$	.125	1.530	



WEIGHT PER LINEAL FOOT OF BRASS AND COPPER STRIP AND SHEET.

Gauge		$\frac{1}{16}''$		$\frac{3}{32}''$		$\frac{1}{8}''$		$\frac{5}{32}''$	
B & S	Dec.	Brass	Copper	Brass	Copper	Brass	Copper	Brass	Copper
1	.289	.0665	.0700	.0998	.1050	.1331	.1400	.1664	.1751
2	.258	.0594	.0625	.0891	.0938	.1188	.1250	.1485	.1563
3	.229	.0527	.0555	.0791	.0832	.1055	.1110	.1318	.1387
4	.204	.0470	.0494	.0705	.0741	.0939	.0988	.1174	.1236
5	.182	.0419	.0441	.0629	.0661	.0838	.0882	.1048	.1102
6	.162	.0373	.0392	.0560	.0589	.0746	.0785	.0933	.0981
7	.144	.0332	.0349	.0497	.0523	.0663	.0698	.0829	.0872
8	.128	.02947	.0305	.0442	.0458	.0589	.0611	.0737	.0763
9	.114	.02625	.02761	.0394	.0413	.0525	.0552	.0656	.0691
10	.102	.02349	.02473	.0352	.0371	.0470	.0494	.0587	.0618
11	.091	.02100	.02196	.0314	.0331	.0419	.0441	.0524	.0551
12	.081	.01865	.01960	.02798	.02942	.0373	.0392	.0466	.0491
13	.072	.01658	.01738	.02487	.02619	.0332	.0349	.0414	.0436
14	.064	.01474	.01553	.02210	.02328	.02947	.0310	.0368	.0388
15	.057	.01312	.01382	.01969	.02065	.02625	.02761	.0328	.0345
16	.051	.01174	.01240	.01761	.01851	.02349	.02468	.02936	.0309
17	.045	.01036	.01088	.01554	.01643	.02072	.02176	.02590	.02726
18	.0403	.00928	.00976	.01392	.01460	.01856	.01948	.02320	.02441
19	.0359	.00827	.00870	.01240	.01297	.01653	.01738	.02066	.02174
20	.0320	.00737	.00775	.01105	.01162	.01474	.01554	.01842	.01938
21	.0285	.00656	.00690	.00984	.01043	.01312	.01384	.01641	.01726
22	.0253	.00583	.00613	.00874	.00919	.01165	.01232	.01456	.01532
23	.0226	.00520	.00547	.00781	.00821	.01041	.01098	.01301	.01369
24	.0201	.00463	.00487	.00694	.00730	.00926	.00974	.01157	.01217
25	.0179	.00412	.00434	.00618	.00650	.00824	.00867	.01030	.01084
26	.0159	.00366	.00385	.00549	.00578	.00732	.00770	.00915	.00963
27	.0142	.00327	.00344	.00490	.00516	.00654	.00688	.00817	.00860
28	.0126	.002898	.00305	.00435	.00458	.00580	.00610	.00725	.00763
29	.0113	.002596	.002741	.00390	.00411	.00520	.00547	.00650	.00684
30	.0100	.002303	.002424	.00345	.00364	.00461	.00485	.00576	.00606
31	.0089	.002049	.002157	.00307	.00323	.00410	.00431	.00512	.00539
32	.0080	.001842	.001941	.002763	.002911	.00368	.00388	.00461	.00485
33	.0071	.001635	.001719	.002452	.002584	.00327	.00344	.00409	.00430
34	.0063	.001451	.001526	.002176	.002291	.002901	.00305	.00363	.00382
35	.0056	.001289	.001358	.001934	.002028	.002579	.002712	.00322	.00339
36	.0050	.001151	.001211	.001727	.001819	.002303	.002419	.002879	.00303
37	.0045	.001036	.001090	.001554	.001635	.002072	.002180	.002590	.002725
38	.0040	.000921	.000969	.001382	.001454	.001842	.001938	.002303	.002423
39	.0035	.000806	.000848	.001209	.001272	.001612	.001696	.002015	.002120
40	.0031	.000714	.000751	.001071	.001126	.001428	.001502	.001784	.001877

Phosphor Bronze.....Use figures for Copper
Muntz Metal.....Subtract 1 % from figures for Brass
Gilding Metal.....Subtract $\frac{1}{2}$ % from figures for Copper
Commercial Bronze.....Subtract 1 % from figures for Copper
Nickel Silver (18%).....Subtract $1\frac{1}{2}$ % from figures for Copper



WEIGHT PER LINEAL FOOT OF BRASS AND COPPER STRIP AND SHEET.

Gauge		$\frac{3}{16}$ "		$\frac{7}{32}$ "		$\frac{1}{4}$ "		$\frac{5}{16}$ "	
B & S	Dec.	Brass	Copper	Brass	Copper	Brass	Copper	Brass	Copper
1	.289	.1996	.2100	.2329	.2450	.2662	.2800	.333	.350
2	.258	.1782	.1875	.2079	.2188	.2376	.2500	.2970	.313
3	.229	.1582	.1664	.1845	.1942	.2109	.2219	.2636	.2774
4	.204	.1409	.1483	.1644	.1730	.1879	.1977	.2349	.2471
5	.182	.1257	.1323	.1467	.1543	.1676	.1764	.2095	.2205
6	.162	.1119	.1177	.1306	.1374	.1492	.1570	.1865	.1962
7	.144	.0995	.1047	.1160	.1221	.1326	.1395	.1658	.1744
8	.128	.0884	.0916	.1032	.1068	.1179	.1221	.1474	.1526
9	.114	.0787	.0829	.0919	.0967	.1050	.1105	.1312	.1381
10	.102	.0705	.0741	.0822	.0865	.0939	.0988	.1174	.1236
11	.091	.0629	.0661	.0733	.0772	.0838	.0882	.1048	.1102
12	.081	.0560	.0589	.0653	.0687	.0746	.0785	.0933	.0981
13	.072	.0497	.0523	.0580	.0611	.0663	.0698	.0829	.0872
14	.064	.0442	.0465	.0516	.0543	.0589	.0620	.0737	.0775
15	.057	.0394	.0414	.0459	.0483	.0525	.0552	.0656	.0690
16	.051	.0352	.0371	.0411	.0432	.0470	.0494	.0587	.0618
17	.045	.0311	.0327	.0363	.0382	.0415	.0436	.0518	.0545
18	.0403	.02784	.02929	.0325	.0342	.0371	.0391	.0464	.0488
19	.0359	.02480	.02609	.02893	.0304	.0331	.0348	.0413	.0435
20	.0320	.02210	.02326	.02579	.02713	.02947	.0310	.0368	.0388
21	.0285	.01969	.02071	.02297	.02416	.02625	.02762	.0328	.0345
22	.0253	.01748	.01839	.02039	.02145	.02330	.02452	.02913	.0306
23	.0226	.01561	.01642	.01821	.01916	.02081	.02190	.02602	.02737
24	.0201	.01388	.01461	.01620	.01704	.01851	.01948	.02314	.02435
25	.0179	.01236	.01301	.01443	.01518	.01649	.01735	.02061	.02168
26	.0159	.01098	.01156	.01281	.01348	.01464	.01541	.01830	.01926
27	.0142	.00981	.01032	.01144	.01204	.01308	.01376	.01636	.01720
28	.0126	.00870	.00916	.01015	.01068	.01160	.01221	.01451	.01526
29	.0113	.00781	.00821	.00911	.00958	.01041	.01095	.01301	.01369
30	.0100	.00691	.00727	.00806	.00848	.00921	.00969	.01153	.01211
31	.0089	.00615	.00647	.00717	.00755	.00820	.00862	.01025	.01078
32	.0080	.00553	.00581	.00644	.00678	.00737	.00775	.00921	.00969
33	.0071	.00490	.00516	.00572	.00602	.00654	.00688	.00817	.00860
34	.0063	.00435	.00458	.00508	.00534	.00580	.00610	.00725	.00763
35	.0056	.00387	.00407	.00451	.00475	.00516	.00543	.00645	.00678
36	.0050	.00345	.00363	.00403	.00424	.00461	.00485	.00576	.00606
37	.0045	.00311	.00327	.00363	.00382	.00415	.00436	.00518	.00545
38	.0040	.002763	.002907	.00322	.00339	.00368	.00388	.00461	.00485
39	.0035	.002418	.002544	.002821	.002968	.00322	.00339	.00403	.00424
40	.0031	.002141	.002253	.002498	.002628	.002855	.00300	.00357	.00375

Phosphor Bronze.....Use figures for Copper
Muntz Metal.....Subtract 1 % from figures for Brass
Gilding Metal.....Subtract $\frac{1}{2}$ % from figures for Copper
Commercial Bronze.....Subtract 1 % from figures for Copper
Nickel Silver (18%).....Subtract $1\frac{1}{2}$ % from figures for Copper



WEIGHT PER LINEAL FOOT OF BRASS AND COPPER STRIP AND SHEET.

Gauge		$\frac{3}{8}$ "		$\frac{1}{2}$ "		$\frac{5}{8}$ "		$\frac{3}{4}$ "	
B & S	Dec.	Brass	Copper	Brass	Copper	Brass	Copper	Brass	Copper
1	.289	.399	.420	.532	.560	.665	.700	.799	.840
2	.258	.356	.375	.475	.500	.594	.625	.713	.750
3	.229	.316	.333	.422	.444	.527	.555	.633	.666
4	.204	.2818	.297	.376	.395	.470	.494	.564	.593
5	.182	.2514	.265	.335	.353	.419	.441	.503	.529
6	.162	.2238	.235	.2984	.314	.373	.392	.448	.471
7	.144	.1989	.209	.2652	.2791	.332	.349	.398	.419
8	.128	.1768	.1831	.2358	.2442	.2947	.305	.354	.366
9	.114	.1575	.1657	.2100	.2209	.2625	.2762	.315	.331
10	.102	.1409	.1483	.1879	.1977	.2349	.2471	.2818	.2965
11	.091	.1257	.1323	.1676	.1764	.2095	.2204	.2514	.2645
12	.081	.1119	.1177	.1492	.1570	.1865	.1962	.2238	.2355
13	.072	.0995	.1047	.1326	.1395	.1658	.1774	.1989	.2093
14	.064	.0884	.0930	.1179	.1240	.1474	.1549	.1768	.1861
15	.057	.0787	.0829	.1050	.1105	.1312	.1378	.1575	.1657
16	.051	.0705	.0741	.0939	.0988	.1174	.1235	.1409	.1483
17	.045	.0622	.0654	.0829	.0872	.1036	.1090	.1243	.1308
18	.0403	.0557	.0586	.0742	.0781	.0928	.0976	.1113	.1172
19	.0359	.0496	.0522	.0661	.0696	.0827	.0870	.0992	.1044
20	.0320	.0442	.0465	.0589	.0620	.0737	.0775	.0884	.0930
21	.0285	.0394	.0414	.0525	.0552	.0656	.0690	.0787	.0829
22	.0253	.0350	.0368	.0466	.0490	.0583	.0613	.0699	.0735
23	.0226	.0312	.0329	.0416	.0438	.0520	.0547	.0624	.0657
24	.0201	.02777	.02922	.0370	.0390	.0463	.0487	.0555	.0584
25	.0179	.02473	.02602	.0330	.0347	.0412	.0434	.0495	.0520
26	.0159	.02197	.02311	.02929	.0308	.0366	.0385	.0439	.0462
27	.0142	.01962	.02064	.02616	.02752	.0327	.0344	.0392	.0413
28	.0126	.01741	.01831	.02321	.02442	.02901	.0305	.0348	.0366
29	.0113	.01561	.01642	.02081	.02190	.02602	.02739	.0312	.0329
30	.0100	.01381	.01454	.01842	.01938	.02303	.02421	.02763	.02911
31	.0089	.01230	.01294	.01639	.01725	.02049	.02162	.02459	.02590
32	.0080	.01105	.01163	.01474	.01550	.01842	.01938	.02210	.02329
33	.0071	.00981	.01032	.01308	.01371	.01635	.01721	.01962	.02058
34	.0063	.00870	.00916	.01160	.01221	.01451	.01530	.01741	.01827
35	.0056	.00774	.00814	.01032	.01085	.01290	.01362	.01547	.01634
36	.0050	.00691	.00727	.00921	.00969	.01151	.01212	.01382	.01459
37	.0045	.00622	.00654	.00829	.00872	.01036	.01090	.01243	.01308
38	.0040	.00553	.00581	.00737	.00775	.00921	.00969	.01105	.01163
39	.0035	.00484	.00509	.00645	.00678	.00806	.00848	.00967	.01017
40	.0031	.00428	.00451	.00571	.00601	.00714	.00751	.00857	.00901

Phosphor Bronze.....Use figures for Copper
Muntz Metal.....Subtract 1 % from figures for Brass
Gilding Metal.....Subtract $\frac{1}{2}$ % from figures for Copper
Commercial Bronze.....Subtract 1 % from figures for Copper
Nickel Silver (18%).....Subtract $1\frac{1}{2}$ % from figures for Copper



WEIGHT PER LINEAL FOOT OF BRASS AND COPPER STRIP AND SHEET.

Gauge		1"		2"		3"		4"	
B & S	Dec.	Brass	Copper	Brass	Copper	Brass	Copper	Brass	Copper
1	.289	1.065	1.120	2.129	2.240	3.19	3.36	4.26	4.48
2	.258	.950	1.100	1.901	2.000	2.851	3.00	3.80	4.00
3	.229	.885	.888	1.770	1.775	2.655	2.663	3.54	3.55
4	.204	.788	.791	1.577	1.581	2.365	2.372	3.15	3.16
5	.182	.670	.705	1.353	1.411	2.029	2.116	2.712	2.822
6	.162	.597	.628	1.194	1.256	1.790	1.884	2.387	2.512
7	.144	.530	.558	1.061	1.116	1.591	1.674	2.122	2.233
8	.128	.472	.488	.943	.977	1.415	1.465	1.886	1.954
9	.114	.420	.442	.840	.884	1.260	1.326	1.680	1.768
10	.102	.376	.395	.752	.791	1.127	1.186	1.503	1.581
11	.091	.335	.353	.670	.705	1.005	1.058	1.341	1.411
12	.081	.2984	.314	.597	.628	.895	.942	1.194	1.256
13	.072	.2652	.2791	.530	.558	.796	.837	1.061	1.116
14	.064	.2358	.2481	.472	.496	.707	.744	.943	.992
15	.057	.2100	.2209	.420	.442	.630	.663	.840	.884
16	.051	.1879	.1977	.376	.395	.564	.593	.752	.791
17	.045	.1658	.1744	.332	.349	.497	.523	.663	.698
18	.0403	.1485	.1562	.2969	.312	.445	.469	.594	.625
19	.0359	.1323	.1392	.2645	.2783	.397	.418	.529	.557
20	.0320	.1179	.1240	.2358	.2481	.354	.372	.472	.496
21	.0285	.1050	.1105	.2100	.2209	.315	.331	.420	.442
22	.0253	.0932	.0981	.1864	.1961	.2796	.2942	.373	.392
23	.0226	.0833	.0876	.1665	.1752	.2498	.2628	.333	.350
24	.0201	.0740	.0779	.1481	.1558	.2221	.2337	.2962	.312
25	.0179	.0659	.0694	.1319	.1388	.1978	.2081	.2638	.2775
26	.0159	.0586	.0616	.1172	.1233	.1757	.1849	.2343	.2465
27	.0142	.0513	.0550	.1026	.1101	.1540	.1651	.2053	.2202
28	.0126	.0464	.0488	.0928	.0977	.1393	.1465	.1857	.1954
29	.0113	.0416	.0438	.0833	.0876	.1249	.1314	.1665	.1752
30	.0100	.0368	.0388	.0737	.0775	.1105	.1163	.1474	.1550
31	.0089	.0328	.0345	.0656	.0690	.0984	.1035	.1312	.1380
32	.0080	.02947	.0310	.0589	.0620	.0884	.0930	.1179	.1240
33	.0071	.02616	.02751	.0523	.0550	.0785	.0826	.1046	.1101
34	.0063	.02321	.02444	.0464	.0488	.0696	.0733	.0928	.0977
35	.0056	.02063	.02168	.0413	.0434	.0619	.0651	.0825	.0868
36	.0050	.01842	.01942	.0368	.0388	.0553	.0581	.0737	.0775
37	.0045	.01658	.01744	.0332	.0349	.0497	.0523	.0663	.0698
38	.0040	.01474	.01550	.02947	.0310	.0442	.0465	.0589	.0620
39	.0035	.01289	.01357	.02579	.02713	.0387	.0407	.0516	.0543
40	.0031	.01142	.01202	.02284	.02403	.0343	.0360	.0457	.0481

Phosphor Bronze.....Use figures for Copper
Muntz Metal.....Subtract 1 % from figures for Brass
Gilding Metal.....Subtract ½% from figures for Copper
Commercial Bronze.....Subtract 1 % from figures for Copper
Nickel Silver (18%).....Subtract 1½% from figures for Copper



WEIGHT PER LINEAL FOOT OF BRASS AND COPPER STRIP AND SHEET.

Gauge		5"		6"		7"		8"	
B & S	Dec.	Brass	Copper	Brass	Copper	Brass	Copper	Brass	Copper
1	.289	5.32	5.60	6.39	6.72	7.45	7.84	8.52	8.96
2	.258	4.75	5.00	5.70	6.0	6.65	7.00	7.60	8.00
3	.229	4.42	4.44	5.31	5.33	6.19	6.21	7.08	7.10
4	.204	3.94	3.95	4.73	4.74	5.52	5.54	6.31	6.33
5	.182	3.38	3.53	4.06	4.23	4.74	4.94	5.41	5.64
6	.162	2.984	3.14	3.58	3.77	4.18	4.40	4.77	5.02
7	.144	2.652	2.791	3.18	3.35	3.71	3.91	4.24	4.47
8	.128	2.358	2.442	2.829	2.930	3.30	3.42	3.77	3.91
9	.114	2.100	2.209	2.520	2.651	2.940	3.09	3.56	3.54
10	.102	1.879	1.977	2.255	2.372	2.630	2.768	3.01	3.16
11	.091	1.676	1.764	2.011	2.116	2.347	2.469	2.682	2.822
12	.081	1.492	1.570	1.790	1.884	2.089	2.198	2.387	2.512
13	.072	1.326	1.395	1.591	1.674	1.857	1.954	2.122	2.233
14	.064	1.179	1.240	1.415	1.488	1.650	1.736	1.886	1.985
15	.057	1.050	1.105	1.260	1.326	1.470	1.547	1.680	1.767
16	.051	.939	.988	1.127	1.186	1.315	1.384	1.503	1.581
17	.045	.829	.872	.995	1.047	1.160	1.221	1.326	1.395
18	.0403	.742	.781	.891	.937	1.039	1.093	1.188	1.250
19	.0359	.661	.696	.794	.835	.926	.974	1.058	1.113
20	.0320	.589	.620	.707	.744	.825	.868	.943	.992
21	.0285	.525	.552	.630	.663	.735	.773	.840	.884
22	.0253	.466	.490	.559	.588	.652	.686	.746	.785
23	.0226	.416	.438	.500	.526	.583	.613	.666	.701
24	.0201	.370	.390	.444	.468	.518	.545	.592	.623
25	.0179	.330	.347	.396	.416	.462	.486	.528	.555
26	.0159	.2929	.308	.351	.370	.410	.431	.469	.493
27	.0142	.2566	.2752	.308	.330	.359	.385	.411	.440
28	.0120	.2321	.2442	.2785	.2930	.325	.342	.371	.391
29	.0113	.2081	.2190	.2498	.2628	.2914	.307	.333	.350
30	.0100	.1842	.1938	.2210	.2326	.2579	.2713	.2947	.310
31	.0089	.1639	.1725	.1967	.2070	.2295	.2415	.2623	.2760
32	.0080	.1474	.1550	.1768	.1861	.2063	.2171	.2358	.2481
33	.0071	.1308	.1371	.1569	.1651	.1831	.1926	.2092	.2202
34	.0063	.1160	.1221	.1393	.1465	.1625	.1709	.1857	.1954
35	.0056	.1032	.1035	.1238	.1302	.1444	.1519	.1650	.1736
36	.0050	.0921	.0969	.1105	.1163	.1289	.1357	.1474	.1550
37	.0045	.0329	.0872	.0995	.1047	.1160	.1221	.1326	.1395
38	.0040	.0737	.0775	.0884	.0930	.1032	.1085	.1179	.1240
39	.0035	.0645	.0678	.0774	.0814	.0903	.0950	.1032	.1085
40	.0031	.0571	.0601	.0685	.0721	.0799	.0841	.0914	.0961

Phosphor Bronze.....Use figures for Copper
Muntz Metal.....Subtract 1 % from figures for Brass
Gilding Metal.....Subtract ½ % from figures for Copper
Commercial Bronze.....Subtract 1 % from figures for Copper
Nickel Silver (18%).....Subtract 1½% from figures for Copper



WEIGHT PER LINEAL FOOT OF BRASS AND COPPER STRIP AND SHEET.

Gauge		9"		10"		11"		12"	
B & S	Dec.	Brass	Copper	Brass	Copper	Brass	Copper	Brass	Copper
1	.289	9.58	10.08	10.65	11.20	11.71	12.32	12.75	13.44
2	.258	8.55	9.00	9.50	10.00	10.45	11.00	11.35	12.00
3	.229	7.96	7.99	8.85	8.88	9.73	9.77	10.11	10.66
4	.204	7.09	7.12	7.88	7.91	8.67	8.69	9.003	9.48
5	.182	6.09	6.35	6.70	7.05	7.37	7.76	8.017	8.46
6	.162	5.37	5.65	5.97	6.28	6.564	6.91	7.139	7.54
7	.144	4.77	5.02	5.30	5.58	5.832	6.141	6.358	6.70
8	.128	4.24	4.40	4.72	4.88	5.187	5.372	5.662	5.860
9	.114	3.78	3.98	4.20	4.42	4.620	4.860	5.042	5.302
10	.102	3.38	3.56	3.76	3.95	4.134	4.349	4.490	4.744
11	.091	3.02	3.17	3.35	3.53	3.687	3.880	3.998	4.232
12	.081	2.686	2.826	2.984	3.14	3.282	3.454	3.561	3.768
13	.072	2.387	2.512	2.652	2.791	2.917	3.069	3.171	3.348
14	.064	2.122	2.233	2.358	2.481	2.594	2.728	2.824	2.976
15	.057	1.890	1.988	2.100	2.209	2.310	2.431	2.515	2.652
16	.051	1.691	1.779	1.879	1.977	2.066	2.174	2.239	2.372
17	.045	1.492	1.570	1.658	1.744	1.824	1.919	1.914	2.094
18	.0403	1.336	1.406	1.485	1.562	1.633	1.718	1.776	1.874
19	.0359	1.190	1.252	1.323	1.391	1.455	1.531	1.582	1.670
20	.0320	1.061	1.116	1.179	1.240	1.296	1.364	1.408	1.488
21	.0285	.945	.994	1.050	1.105	1.155	1.215	1.254	1.326
22	.0253	.839	.883	.932	.981	1.025	1.078	1.117	1.176
23	.0226	.749	.788	.833	.876	.916	.964	.9946	1.052
24	.0201	.666	.701	.740	.779	.814	.857	.8857	.936
25	.0179	.593	.624	.659	.694	.725	.763	.7887	.832
26	.0159	.527	.555	.586	.616	.6439	.678	.7024	.740
27	.0142	.462	.495	.513	.550	.5646	.6052	.6255	.660
28	.0126	.418	.440	.464	.488	.5106	.5372	.5570	.5860
29	.0113	.375	.394	.416	.438	.4579	.4818	.4961	.5256
30	.0100	.332	.349	.368	.388	.4048	.4264	.4417	.4652
31	.0089	.2951	.311	.328	.345	.3606	.3795	.3934	.4140
32	.0080	.2652	.2791	.2947	.310	.3242	.3411	.3503	.3722
33	.0071	.2354	.2477	.2616	.2742	.2877	.3022	.3120	.3302
34	.0063	.2089	.2198	.2321	.2443	.2553	.2686	.2778	.2930
35	.0056	.1857	.1954	.2063	.2171	.2270	.2387	.2474	.2604
36	.0050	.1658	.1744	.1842	.1939	.2026	.2132	.2203	.2326
37	.0045	.1492	.1570	.1658	.1744	.1824	.1919	.1962	.2094
38	.0040	.1326	.1395	.1474	.1550	.1621	.1705	.1747	.1860
39	.0035	.1160	.1221	.1289	.1357	.1419	.1492	.1556	.1628
40	.0031	.1028	.1081	.1142	.1202	.1256	.1322	.1386	.1442

Phosphor Bronze.....Use figures for Copper
Muntz Metal.....Subtract 1 % from figures for Brass
Gilding Metal.....Subtract ½ % from figures for Copper
Commercial Bronze.....Subtract 1 % from figures for Copper
Nickel Silver (18%).....Subtract 1½ % from figures for Copper



No. of Wire Gauge	American or Brown & Sharpe	Birmingham or Stubs Wire	No. of Wire Gauge	American or Brown & Sharpe	Birmingham or Stubs Wire
0 ⁴	.46	.454	19	.03589	.042
0 ³	.40964	.425	20	.031961	.035
0 ²	.3648	.38	21	.028462	.032
0	.32486	.34	22	.025347	.028
1	.2893	.3	23	.022571	.025
2	.25763	.284	24	.0201	.022
3	.22942	.259	25	.0179	.02
4	.20431	.238	26	.01594	.018
5	.18194	.22	27	.014195	.016
6	.16202	.203	28	.012641	.014
7	.14428	.18	29	.011257	.013
8	.12849	.165	30	.010025	.012
9	.11443	.148	31	.008928	.01
10	.10189	.134	32	.00795	.009
11	.090742	.12	33	.00708	.008
12	.080808	.109	34	.006304	.007
13	.071961	.095	35	.005614	.005
14	.064084	.083	36	.005	.004
15	.057068	.072	37	.004453
16	.05082	.065	38	.003965
17	.045257	.058	39	.003531
18	.040303	.049	40	.003144



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	$\frac{63}{64}$.984375
1		1.



BUILDING PRODUCTS

BRASS AND COPPER PIPE — Chase manufactures plumbing pipe in three different alloys — Chase Brass, Red Brass and Copper. One of these three plumbing pipes will meet any water condition.

COPPER WATER TUBE — Chase recommends the use of Copper Water Tube and Fittings for water supply lines and heating lines for both new installations and replacement work. There are three types of copper water tube and specific uses for each type are filed in Sweet's Architectural Catalog.

COPPER RADIATORS — Chase manufactures a complete line of free standing and concealed copper radiators or convectors adaptable for hot water, steam or vapor heating systems.

LIGHTING FIXTURES — Chase Lighting Fixtures and Lamps are made of brass, correctly designed and styled in seven distinctive periods, with finishes that are authentically correct. Although equal in finish, materials and workmanship to custom-made lighting fixtures, Chase fixtures are priced from one-third to one-half less.

COPPER ROOFING PRODUCTS — Chase Copper Gutters, Downspouts and Flashings are made of full 16-oz. copper and stamped with the Chase name and trade-mark. It has been proved over a long period of time that 16-oz. copper is the lightest weight that will give satisfactory service.

BRONZE SCREEN CLOTH — Chase Commercial Bronze is the most economical, non-rusting material for screening windows, doors and porches where quality, ultimate cost and permanence are controlling factors. Chase Bronze Screen Cloth is preferred to copper in that it has greater strength and stiffness.



HASE

Brass and Copper

Co., Incorporated is a subsidiary of Kennecott Copper Corporation. The Chase organization takes Kennecott Copper, melts it, alloys it and casts it in its mills in Waterbury, Conn., and Cleveland, Ohio. Brass, copper, bronze, nickel silver and special alloys are produced in the forms of sheet, rod, wire, tube and other mill specialties. These products as well as many other brass and copper specialties are carried in stock ready for quick delivery by Chase Warehouses in the following cities:

New York

Boston

Newark

Philadelphia

Baltimore

Pittsburgh

Cincinnati

Cleveland

Detroit

Chicago

Milwaukee

Minneapolis

St. Louis

New Orleans

Los Angeles

Seattle

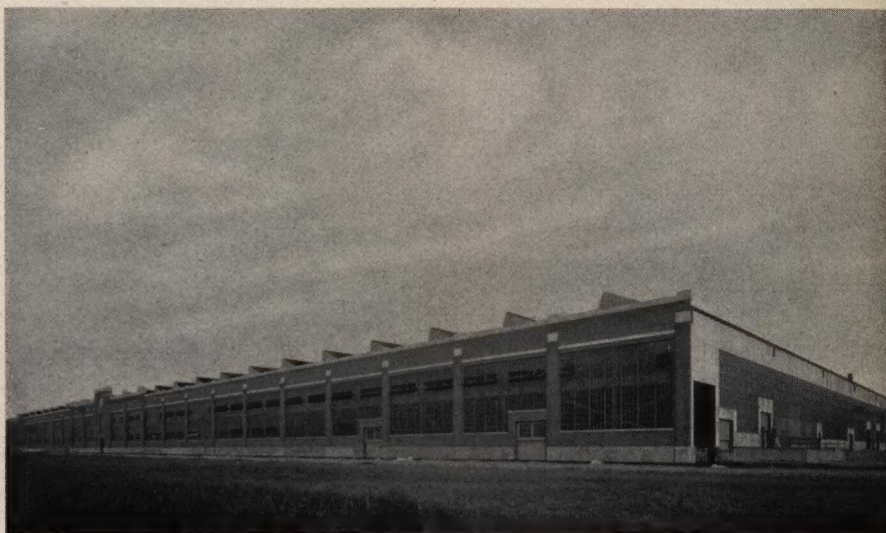
San Francisco

In addition to its mills and warehouses Chase operates three manufacturing plants which fabricate brass and copper articles of all kinds ranging from tiny screws to lighting fixtures and copper radiators. Two of the Chase Mills are illustrated on the opposite page.



RIGHT: The new CHASE Mill at Cleveland, Ohio, completed a few years ago, employs latest production methods in filling the brass, copper and bronze requirements of the West and Mid-Western States.

BELOW: The CHASE Metal Works plant at Waterbury, Conn., is almost a mile long and is one of the largest mills in the world under one roof. It has one room over ten acres in size and is fully equipped for the manufacture of all kinds of brass, bronze and copper products.





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CHASE BRASS & COPPER CO.
Incorporated

Subsidiary of Kennecott Copper Corporation
Waterbury Connecticut

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